

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

اختبار شهر نوفمبر



Important questions on unit two from the directorates' exams



First multiple choice questions

- 1 The coefficient of the algebraic term x^2 is *(Deir Mawas - El-Menia 25)*
 (a) 0 (b) 1 (c) 2 (d) 3
- 2 The coefficient of the algebraic term $-2xy^3$ is *(El-Waily - Cairo 25)*
 (a) -2 (b) 3 (c) 2 (d) -6
- 3 Which of the following represents two similar algebraic terms ? *(Shibin El-Kom - El-Monofia 25)*
 (a) x^2, y^2 (b) $7m, 7$ (c) $3b, 8b$ (d) $2a, -2a^2$
- 4 Which of the following are two similar algebraic terms ? *(El-Rahmaniyah - El-Beheira 25)*
 (a) $5x^2y, 7yx^2$ (b) $5x, 5$ (c) $13a^2, 7a^3$ (d) $3x, -7x^2$
- 5 The constant term in the expression : $4x + 3y - 8$ is *(Shoubra - Cairo 25)*
 (a) 3 (b) 4 (c) -8 (d) 16
- 6 How many terms are there in the expression : $abc - 8$? *(Manfalut - Assiut 25)*
 (a) 1 (b) 2 (c) 3 (d) 4
- 7 In the expression : $4x - 6y + 7xy - 8$, the coefficient of y is *(Luxor - Luxor 25)*
 (a) 6 (b) 7 (c) 8 (d) -6
- 8 What is the algebraic expression representing 5 is added to twice the number x ? *(Akhmim - Souhag 25)*
 (a) $x - 5$ (b) $2x - 5$ (c) $2x + 5$ (d) $x + 5$
- 9 Youssef has x pounds and his father gave him five pounds. Which mathematical expression expresses what Youssef has ? *(Kafr Saad - Damietta 25)*
 (a) 5 (b) $x + 5$ (c) $x - 5$ (d) $5x$
- 10 What is the inequality representing the set of integers less than or equal to 3 ? *(El-Khosous - El-Kalyoubia 25)*
 (a) $x < 3$ (b) $x \leq 3$ (c) $x > 3$ (d) $x \geq 3$

11 Ahmed's age is now x years old. What is the mathematical expression for Ahmed's age after 9 years ? (South - Ismailia 25)

- (a) $x + 9$ (b) $x - 9$ (c) $18 - x$ (d) $18 + x$

12 Heba is now x years old. Her age before 9 years was years. (El-Qassasin - Ismailia 25)

- (a) $x \div 9$ (b) $x - 9$ (c) $x + 9$ (d) $9x$

13 Two consecutive natural numbers , if the first number is $x - 2$, then the next number is (El-Khanka - El-Kalyoubia 25)

- (a) x (b) $x - 1$ (c) $1 + x$ (d) $2 + x$

14 The mathematical expression : $6x = 7$ represents (El-Mansha - Souhag 25)

- (a) An inequality. (b) An equation.
(c) An algebraic expression. (d) A numerical expression.

15 $5a + a =$ (Saqalta - Souhag 25)

- (a) $6a$ (b) $-6a$ (c) $4a$ (d) $-4a$

16 Which of the following is equal to $8y$? (El-Agmy - Alex. 25)

- (a) $5 + 3y$ (b) $3 + 5y$ (c) $8 + y$ (d) $3y + 5y$

17 A rectangle with length of $5x$ cm and width of $2x$ cm has a perimeter of cm. (El-Qusaiya - Assiut 25)

- (a) $7x$ (b) $14x$ (c) $10x$ (d) $10x^2$

18 The quantity represented by the number 10 subtracted from x is (El-Hawamdiya - Giza 25)

- (a) $10 - 5x$ (b) $x - 10$ (c) $5x - 10$ (d) $10 - x$

19 What is the mathematical expression that represents the subtraction (-2) from x ? (El-Zarka - Damietta 25)

- (a) $x - 2$ (b) $2 - x$ (c) $-2 - x$ (d) $x + 2$

20 If x is greater than -5 , then the mathematical expression represents this is (Fayed - Ismailia 25)

- (a) -4 (b) 4 (c) $x - 5$ (d) $x + 5$

- 21** The result of the addition of $-5x$, $3x$ is *(Ashmoun - El-Monofia 25)*
 (a) $-2x$ (b) $2x$ (c) $-8x$ (d) $8x$
-
- 22** The rest of the subtraction $5x$ from $7x$ equals *(New Cairo - Cairo 25)*
 (a) $2x$ (b) $12x$ (c) $-2x$ (d) $-12x$
-
- 23** The result of subtracting $3a$ from a is *(Abu El-Nomros - Giza 25)*
 (a) $-2a$ (b) $2a$ (c) a^2 (d) $4a$
-
- 24** The result of the subtraction $(-7a)$ from $(3a)$ is *(East Mansoura - El-Dakahlia 25)*
 (a) $4a$ (b) $-4a$ (c) $-10a$ (d) $10a$
-
- 25** What is the increase of $7x$ than $2x$? *(Ibrahimia - El-Sharkia 25)*
 (a) $9x$ (b) $5x$ (c) $-5x$ (d) x
-
- 26** The algebraic term : $-5x$ exceeds the algebraic term : $-11x$ by *(North Giza - Giza 25)*
 (a) $-16x$ (b) $6x$ (c) $-6x$ (d) $16x$
-
- 27** What is the algebraic expression that is equivalent to the following expression?
 $2x - 3 - 4x + 1$ *(Qalyub - El-Kalyoubia 25 / Bandar Damanhour - El-Beheira 25)*
 (a) $2x - 2$ (b) $-2x + 2$ (c) $-6x - 4$ (d) $-2 - 2x$
-
- 28** The simplest form of the expression : $a + a + b + a + b$ is *(Borg El-Arab - Alexandria 25)*
 (a) 5 (b) $2b + 3a$ (c) $2a + 3b$ (d) $5ab$
-
- 29** The simplest form of the expression : $2x + 5y + x - 5y$ is *(Esna - Luxor 25)*
 (a) $3x$ (b) $10y$ (c) $3x + 10y$ (d) $3x - 10y$
-
- 30** The result of adding the two expressions : $4x + 6$, $3x - 2$ is *(Manshaat El-Qanater - Giza 25 / Itai El-Baroud - El-Beheira 25)*
 (a) $7x + 8$ (b) $7x + 4$ (c) $-x + 4$ (d) $-x - 4$
-
- 31** The sum of the two expressions : $-3x + 5$, $2x - 3$ is *(Tala - El-Monofia 25)*
 (a) $-5x + 2$ (b) $2 - x$ (c) $2 + x$ (d) $x - 2$
-
- 32** A rectangle has a perimeter of 24 cm. If its length is m cm, then its width is cm. *(Kom Ambo - Aswan 25)*
 (a) $m - 12$ (b) $12 - m$ (c) $12 + m$ (d) $12m$

- 33** Which of the following expresses twice the number x plus 3 is equals to 7 ?
(Menouf - El-Monofia 25)
(a) $x + 3 = 7$ (b) $2x + 3 = 7$ (c) $3x + 2 = 7$ (d) $2x + 7 = 3$
-
- 34** Ziad is now x year old , and seven years ago he was 18 year old. Which of the following equations expresses the previous situation ?
(Qaleen - Kafr El-Sheikh 25)
(a) $x + 18 = 7$ (b) $x - 7 = 18$ (c) $x + 7 = 18$ (d) $x = 18$
-
- 35** Two consecutive odd numbers add up to 28. Which of the following equations expresses this ?
(Ihnasia - Beni Suef 25)
(a) $x + x + 1 = 28$ (b) $2x + 1 = 28$ (c) $2x - 1 = 28$ (d) $2x + 2 = 28$
-
- 36** If $-7k = 28$, then $k + 6 = \dots\dots\dots$
(El-Gomrok - Alex. 25)
(a) -2 (b) 2 (c) 6 (d) -6
-
- 37** If $3x - 2 = 4$, then $5x = \dots\dots\dots$
(Facous - El-Sharkia 25)
(a) 1 (b) -8 (c) 10 (d) 12
-
- 38** If $(x - 1)$ is the multiplicative inverse of the number $\frac{1}{5}$, then $x = \dots\dots\dots$ (Farshout - Qena 25)
(a) 6 (b) 4 (c) 5 (d) $1\frac{1}{5}$
-
- 39** If $\frac{x}{5}$ is the largest negative integer , then $x + 5 = \dots\dots\dots$ (Kaha - El-Kalyoubia 25)
(a) -3 (b) -1 (c) 0 (d) 3
-
- 40** If the substitution set is $\{1, 4, 2\}$, then the solution set of the equation $2x = 10$ is
(El-Badrashin - Giza 25)
(a) $\{5\}$ (b) $\{2\}$ (c) $\{1\}$ (d) $\emptyset$
-
- 41** The solution set in $\mathbb{N}$ of the equation $3x - 1 = 10$ is
(Qattour - El-Gharbia 25)
(a) $\{3\}$ (b) $\{4\}$ (c) $\{5\}$ (d) $\emptyset$
-
- 42** Which of the following equations is equivalent to the equation : $2n + 1 = \frac{3}{2}$?
(Samasta - Beni Suef 25)
(a) $n + 2 = 6$ (b) $2n = 4$ (c) $8n = 2$ (d) $n - 2 = 1$
-
- 43** Which of the following equations is not equivalent to the equation : $3x - 1 = 8$?
(Farshout - Qena 25)
(a) $3x - 2 = 7$ (b) $x + 1 = 4$ (c) $5x = 5$ (d) $x - 1 = 2$

- 44** The solution set of the equation: $3x - 1 = 6$ in $\mathbb{Z}$ is *(Rashid - El-Beheira 25)*
 (a) $\{2\}$ (b) $\emptyset$ (c) $\{\frac{7}{3}\}$ (d) $\{-2\}$
-
- 45** Which of the following equations has no solution in $\mathbb{Z}$? *(El-Warrak - Giza 25)*
 (a) $3x = 6$ (b) $3x = 15$ (c) $3x = 16$ (d) $3x = 21$
-
- 46** The length of the base of a parallelogram is 15 cm and its corresponding height is $(2x + 3)$ cm, if its area is 135 square centimeters, then $x =$ *(Qaleen - Kafr El-Sheikh 25)*
 (a) 2 (b) 3 (c) 4 (d) 5

Second

Essay questions

1 Write the following algebraic expressions in their simplest form :

- ① $3x + 2y + 5x - 2y + 4$ *(Matay - El-Menia 25)*
 ② $3x - 2y - y + x$
 Then find the value of the expression when : $x = 3$, $y = 1$ *(Fayed - Ismailia 25)*
 ③ $2(n - 3m) - 3(2n + m)$ *(El-Khanka - El-Kalyoubia 25)*
 ④ $3(x - 7) - 5(2x - 5)$ *(Sars El-Layan - El-Monofia 25)*
 ⑤ $3(a - 2b) - 2(a + b)$
 Then find the value of the expression when : $a = 5$, $b = -1$ *(Atfih - Giza 25)*

2 Find the sum of each of the following :

- ① $2a - 3b + 10$, $3a + 5b - 7$ *(New Cairo - Cairo 25)*
 ② $a + 2b + 5$, $3a - 2b - 8$ *(Kom Ambo - Aswan 25)*
 ③ $6a + 4b - c$, $2a - 3b + 5c$ *(Fakous - El-Sharkia 25)*
 ④ $-m + 9n - k$, $-3m - 12n + k$ *(Abu Qurqas - El-Menia 25)*
 ⑤ $4x^2 - 3x + 5$, $x^2 - 7x - 8$ *(North Giza - Giza 25)*
 ⑥ $3b - 7a + 8$, $4a + b - 4$, $3a - 2b + 1$ *(El-Agouza - Giza 25)*
 ⑦ $2a - 5b - 3$, $2b + 3a$, then find the numerical value of the result when:
 $a = 3$, $b = 2$ *(Shibin El-Kom - El-Monofia 25)*

3 Find the difference in each of the following :

- ① $4x - 5y + 7$ from $7x + 3y + 2$ *(El-Maasara - Cairo 25)*
 ② $2a - 5b + 3w$ from $2a - 5b - w$ *(Badrashin - Giza 25)*

4 What is the increase of the expression : $3x - 6y + 4$ than the expression : $3x + y - 3$?

(El-Kareem - El-Sharkia 25)

5 What is the decrease of the expression : $x + 2y - 3z$ than the expression : $3y - 3z + 10x$?
(Rashid - El-Beheira 25)

6 If the sum of two expressions is : $7x - 3y + 5z$ and one of these expression is : $2y - 3x + z$ find the other expression.
(Ihnasia - Beni Suef 25)

7 Find the solution set of the equation : $3x - 6 = 18$ if the substitutions set is $\{6, 7, 8\}$
(South - Ismailia 25)

8 Find the solution set of each of the following equations in $\mathbb{N}$:

① $3x + 4 = 10$

(El-Harm - Giza 25)

② $5x - 10 = 5$

(Ibrahimia - El-Sharkia 25)

③ $-3 + 4x = 7$

(Kafr Saad - Damietta 25)

④ $3x + 5 = 2$

(Dayroot - Assiut 25)

⑤ $2(3y - 1) = 10$

(Damanshour - El-Beheira 25)

⑥ $3(x - 2) = -8$

(Manfalut - Assiut 25)

⑦ $7 = 2(x + 3)$

(Sidi Salem - Kafr El-Sheikh 25)

9 Find a solution set of each of the following equations in $\mathbb{Z}$:

① $3x + 11 = 2$

(El-Montazah - Alex. 25)

② $5x + 7 = 37$

(East El-Mahalla - El-Gharbia 25)

③ $3x - 5 = 7$

(El-Santa - El-Gharbia 25)

④ $2x - 3 = -15$

(West Kafr El-Sheikh - Kafr El-Sheikh 25)

⑤ $5(x + 7) = 80$

(Samasta - Beni Suef 25)

⑥ $3(2x - 1) = 27$

(Samannoud - El-Gharbia 25)

10 Find the solution set of the following equations in $\mathbb{Q}$:

① $3x + 7 = 22$

(Adwa - El-Menia 25)

② $5 + 2x = 15$

(Mit Salsil - El-Dakahlia 25)

③ $5x - 9 = 11$

(Dar El-Salam - Souhag 25)

④ $2x - 5 = -2$

(El-Zarka - Damietta 25)

⑤ $\frac{2}{5}x + 1 = 3$

(El-Manzala - El-Dakahlia 25)

⑥ $2(x + 3) = 36$

(El-Khosous - El-Kalyoubia 25)

⑦ $3(2x - 3) = 9$

(Ibshaway - El-Fayoum 25)

⑧ $3(x - 5) = -18$

(El-Qareen - El-Sharkia 25)

11 Find the solution set of the following equations in $\mathbb{Q}$:

① $5x + 3 = 12 + 2x$

(Adfu - Aswan 25)

② $3x + 2 = x + 10$

(Esna - Luxor 25)

③ $2(x + 3) = 1 + x$

(Abu El-Matamir - El-Beheira 25)

④ $2(x + 4) = 5x - 1$

(Atfih - Giza 25)

12 If $5k = 20$, what is the value of : $3k + 1$?

(El-Bagour - El-Monofia 25)

13 Three consecutive numbers their sum is 123 Find these numbers in steps.

(Quesna - El-Monofia 25)

14 Three consecutive even numbers their sum is 84 Find these numbers.

(Nabarow - El-Dakahlia 25)

15 Two natural numbers , one of them is three times the other , and their sum is 48
Find the two numbers.

(El-Sinnblawein - El-Dakahlia 25)

16 If Tamer now is 4 times Khalid's age , and the sum of their ages is 50 year.
How old is Tamer now ?

(El-Tall El-Kabir - Ismailia 25)

17 If the length of a rectangle is twice as its width , if the perimeter of the rectangle is 30 cm.
Calculate its area.

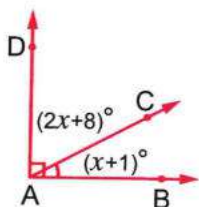
(El-Agouza - Giza 25)

1 Choose the correct answer from the given ones :

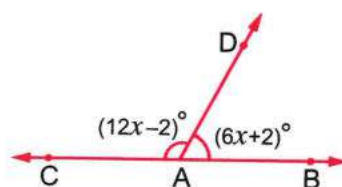
- 1 If $m(\angle A) = 70^\circ$ and $\angle A$ complements $\angle B$, what is the measure of $\angle B$?
 (a) 20° (b) 110° (c) 290° (d) 70°
- 2 If $\angle X$ and $\angle Y$ are supplementary angles , and $m(\angle X) = 3 m(\angle Y)$, what is the measure of $\angle X$?
 (a) 45° (b) 90° (c) 135° (d) 180°
- 3 What is the type of the angle that supplements an obtuse angle ?
 (a) Acute. (b) Obtuse. (c) Right. (d) Reflex.
- 4 If $m(\angle A) = 36^\circ 60'$, then the reflex of $m(\angle A)$ is
 (a) 37° (b) 53° (c) 143° (d) 323°
- 5 If $\{7, 3x\} = \{6, y+3\}$, what is the value of $x+y$?
 (a) 4 (b) 5 (c) 6 (d) 13
- 6 If $x = 2$, $y = -1$, then $x+y =$
 (a) 1 (b) -1 (c) 3 (d) -3

2 Find the value of x in each of the following :

1



2



- 3 1 If $y = \frac{1}{2}$ and $x = \frac{3}{4}$, find the value of : $\frac{x+y}{x-y}$

- 2 If $X = \{2, 3, 9\}$, $Y = \{1, 2, 3, 7\}$, $Z = \{5, 3\}$, find using listing method :

- ① $X \cup Y \cup Z$
 ② $X \cap Y$
 ③ $X \cap Y \cap Z$

1 Choose the correct answer from the given ones :

1 The sum of the measures of the accumulative angles at a point equals

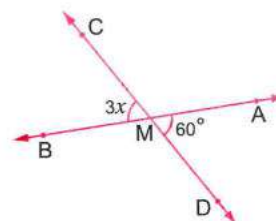
- (a) Two right angles. (b) Three right angles.
(c) Four right angles. (d) Five right angles.

2 In the opposite figure :

$$\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$$

what is the value of x ?

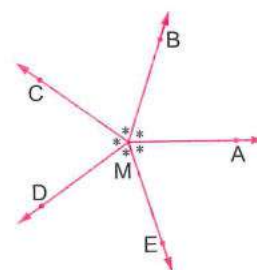
- (a) 60 (b) 180
(c) 20 (d) 30



3 In the opposite figure :

What is the measure of $\angle AMC$?

- (a) 60° (b) 72°
(c) 144° (d) 360°



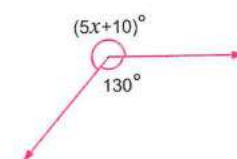
4 If two vertically opposite angles have measures $(3x)^\circ$ and $(x + 56)^\circ$, then the measure of each one of them is

- (a) 28° (b) 56° (c) 80° (d) 84°

5 In the opposite figure :

What is the value of x ?

- (a) 230 (b) 220
(c) 44 (d) 22



6 If the price of a car increased from 250,000 LE to 300,000 LE, what is the rate of increase ?

- (a) 10 % (b) 20 % (c) 50 % (d) 70 %

2 1 In the opposite figure :

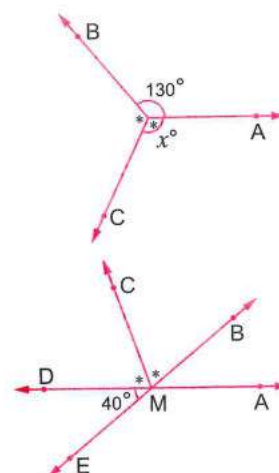
Find the value of : x

2 In the opposite figure :

$$\overrightarrow{AD} \cap \overrightarrow{EB} = \{M\}$$

, $\overrightarrow{MC}$ bisects $\angle DMB$

Find the value of : $m(\angle AMC)$



3 Find in Q the solution set of each of the following equations :

1 $9 - 2x = 5$

2 $4(x - 1) = 3(x + 1)$

November tests



Test

1

1 Choose the correct answer from the given ones :

1 Which of the following represents the solution to the equation : $3(X - 4) = 0$ in $\mathbb{Q}$?

- (a) 0 (b) 4 (c) -4 (d) 12

2 The angle that supplements an acute angle is angle.

- (a) an acute. (b) an obtuse. (c) a straight. (d) a reflex.

3 If an isosceles triangle has two sides of lengths : 3 cm and 7 cm. What is the length of the third side ?

- (a) 3 cm (b) 4 cm (c) 5 cm (d) 7 cm

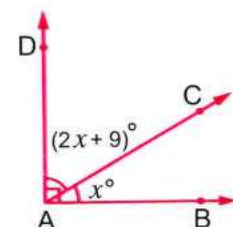
4 If $\angle X$ supplements $\angle Y$, $m(\angle X) = 2m(\angle Y)$, what is the measure of $\angle Y$?

- (a) 120° (b) 60° (c) 45° (d) 30°

5 In the opposite figure :

Find the value of X ?

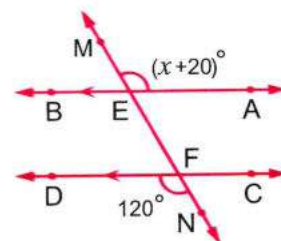
- (a) 90° (b) 33°
(c) 81° (d) 27°



6 In the opposite figure :

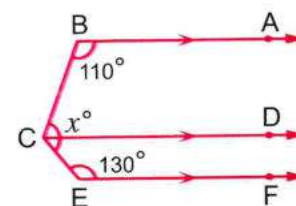
Find the value of X ?

- (a) 40° (b) 80°
(c) 100° (d) 140°



2 In the opposite figure :

Find with proof the value of X



3 Find the solution set then solves each of the following equations :

1 $2X - 7 = -6$ in $\mathbb{Q}$

2 $3(X - 1) = X + 2$ in $\mathbb{Z}$

Test

2

1 Choose the correct answer from the given ones :

- 1 If two adjacent sides of a parallelogram are equal in length , then the shape is
- (a) a square. (b) a rhombus. (c) a rectangle. (d) a trapezium.
- 2 In $\triangle ABC$, if $m(\angle A) + m(\angle B) = 110^\circ$, what is the measure of $\angle C$?
- (a) 110° (b) 90° (c) 70° (d) 55°
- 3 An angle of measure 70° is vertically opposite an angle of measuring
- (a) 30° (b) 70° (c) 90° (d) 180°
- 4 If $m(\angle X) = 42^\circ$, what is the measure of (reflex $\angle X$) ?
- (a) 42° (b) 48° (c) 138° (d) 318°
- 5 The solution set in $\mathbb{Z}$ for the equation : $6 - 3x = x - 4$ is
- (a) $\emptyset$ (b) $\{2\}$ (c) $\{1\}$ (d) $\{3\}$

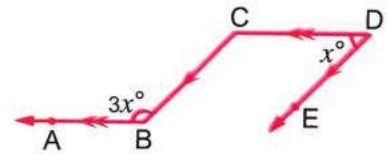
6 In the opposite shape :

$$\overrightarrow{CD} \parallel \overrightarrow{BA}$$

$$, \overrightarrow{DE} \parallel \overrightarrow{CB}$$

What is the value of x ?

- (a) 60° (b) 45° (c) 120° (d) 90°

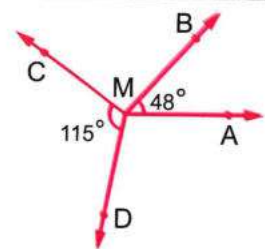


2 In the opposite figure :

$$m(\angle BMC) = 2 m(\angle AMB)$$

$$, m(\angle DMC) = 115^\circ , m(\angle AMB) = 48^\circ$$

, find : $m(\angle AMD)$



- 3 The length of a rectangle is 7 meters longer than it is wide. If its perimeter is 66 meters , find its dimensions.

1 Choose the correct answer from the given ones :

1 Which of the following angles is a right angle ?

- (a) $89^\circ 56'$ (b) $89^\circ 61'$ (c) $89^\circ 60'$ (d) $88^\circ 60'$

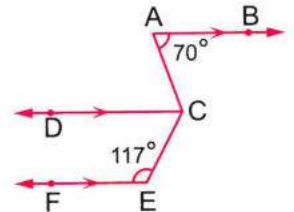
2 In the opposite figure :

$$m(\angle A) = 70^\circ, \overrightarrow{AB} \parallel \overrightarrow{CD} \parallel \overrightarrow{EF}$$

$$, m(\angle E) = 117^\circ$$

What is the measure of $\angle ACE$?

- (a) 127° (b) 120° (c) 187° (d) 133°



3 The two diagonals are equal in length and perpendicular in

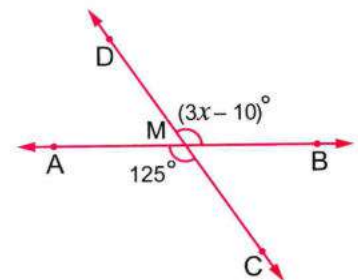
- (a) parallelogram. (b) rectangle. (c) rhombus. (d) square.

4 In the opposite figure :

$$\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$$

What is the value of x ?

- (a) 38° (b) 40°
(c) 45° (d) 55°



5 If $3x = 3$, then $2x - 1 =$

- (a) 1 (b) 2 (c) 3 (d) 4

6 The sum of the measures of the angles of the triangle is equal to the measure of

- (a) a right angle. (b) a straight angle. (c) an acute angle. (d) a reflex angle.

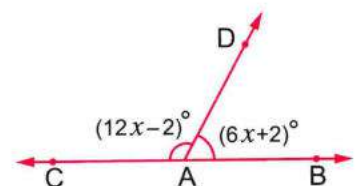
2 Two natural numbers, one is three times the other, and their sum is 92

What are the two numbers ?

3 In the opposite figure :

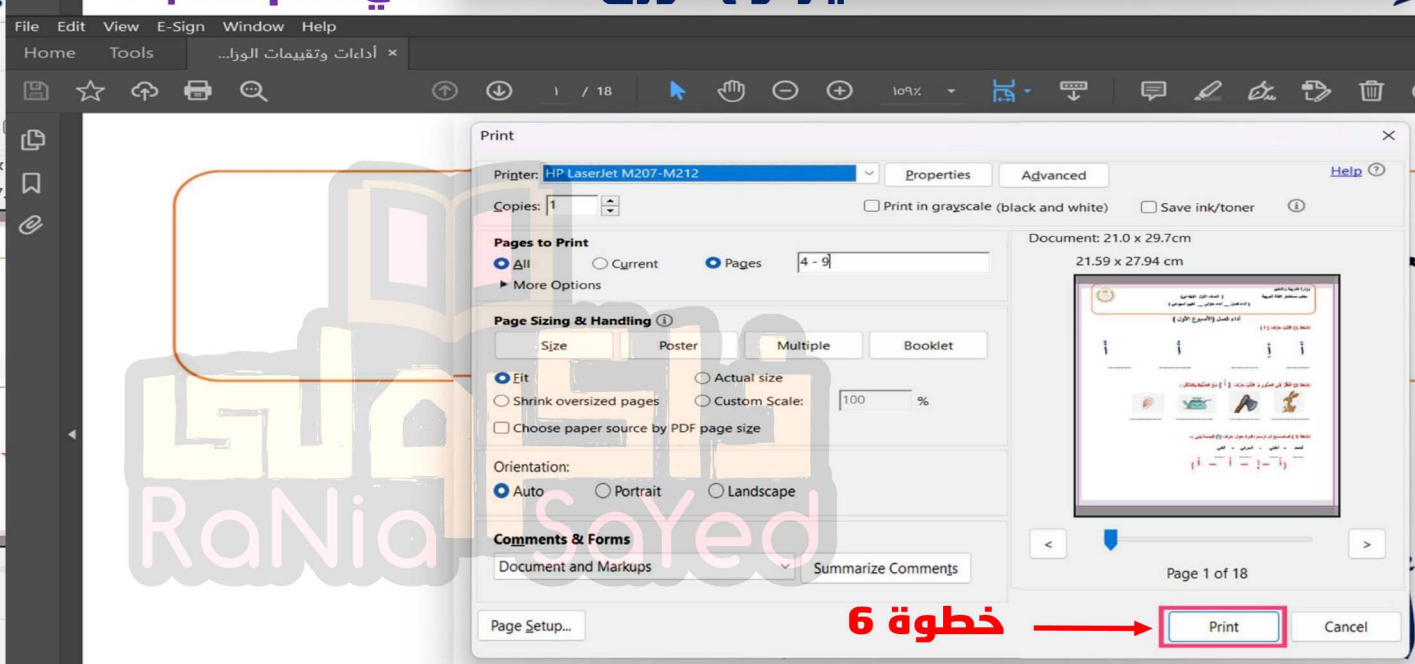
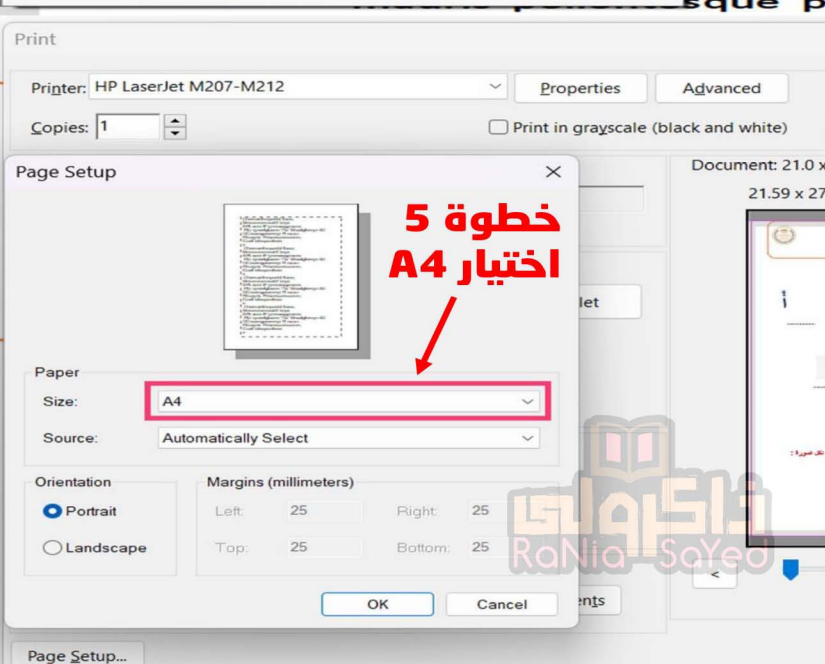
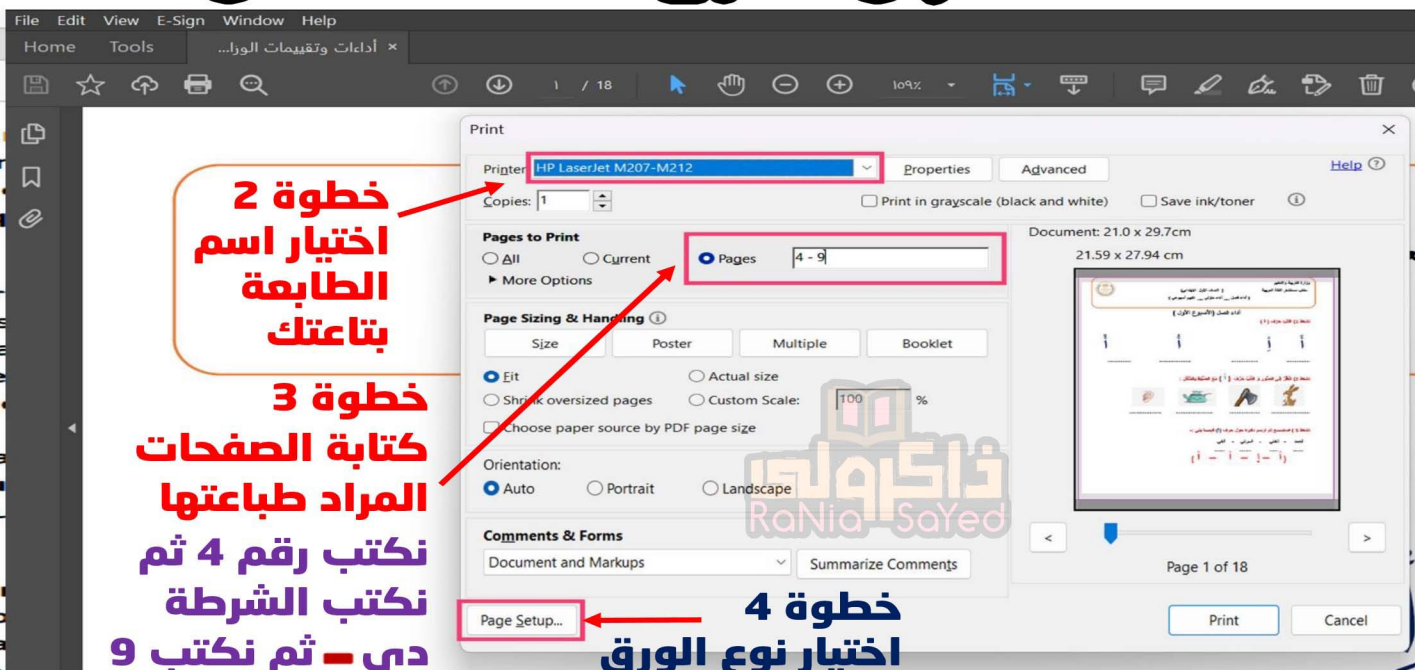
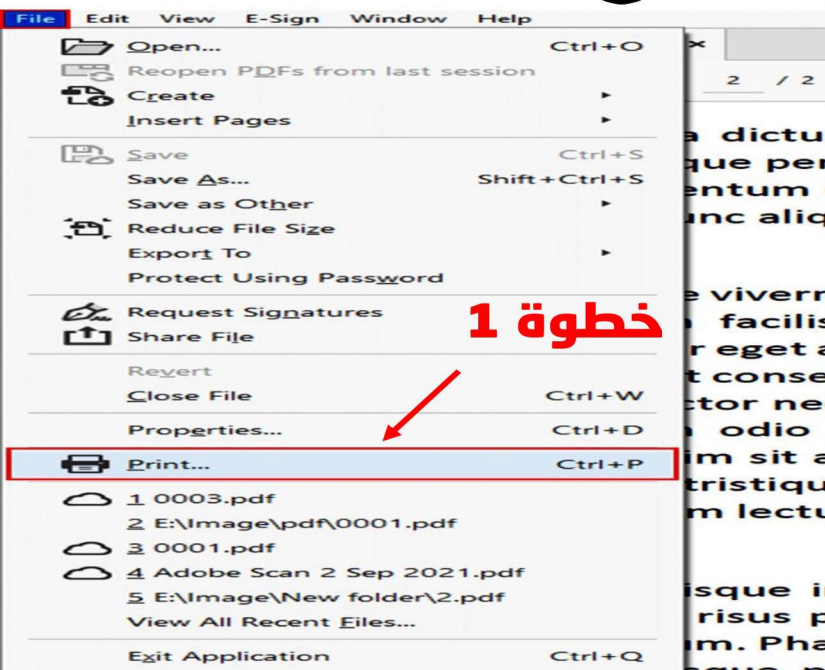
$$\text{If } A \in \overrightarrow{BC}$$

, find the value of x with proof.



كيفية طباعة صفحات معينة من ملف معين

مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

اختبار شهر نوفمبر



1- Choose the correct answer:

2

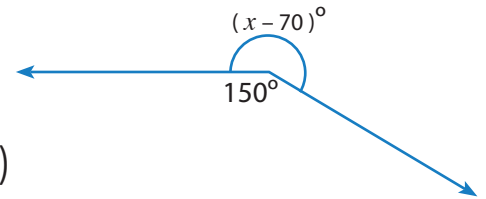
a The S.S of $\frac{1}{2}x + 4 = 5$ in $\mathbb{Q}$ is

($\{\frac{1}{2}\}$, {18} , {2} , $\emptyset$)

b In the opposite figure:

The value of $x =$

(270 , 280 , 140 , 220)



2- Answer each of the following:

8

a If my mother's age now is three times my age, and she is also 24 years older than me.

How old is each of us now?

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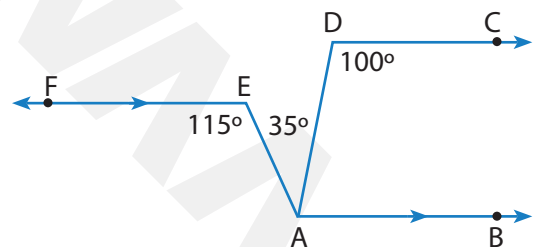
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b In the opposite figure:

$\overrightarrow{AB} \parallel \overrightarrow{EF}$, $m(\angle D) = 100^\circ$, $m(\angle E) = 115^\circ$

and $m(\angle DAE) = 35^\circ$

Prove that: $\overrightarrow{AB} \parallel \overrightarrow{DC}$



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c Write in the simplest form, the expression: $2(n - 3m) - 3(2n - 1)$,

and then find its value at: $m = -2$, $n = 2$

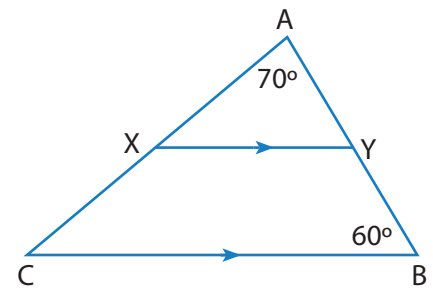
d In the opposite figure:

ABC is a triangle,

$Y \in \overline{AB}$, $X \in \overline{AC}$, $\overline{XY} \parallel \overline{CB}$, $m(\angle A) = 70^\circ$

and $m(\angle B) = 60^\circ$

Find : $m(\angle AXY)$ and $m(\angle YXC)$



1- Choose the correct answer:

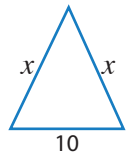
2

- a** Two complementary angles, the ratio between their measures is 2 : 3 , then the measure of the greater angle is (18° , 36° , 54° , 90°)
- b** If $\frac{a}{2} = 0.\overline{5}$, what is the value of $|9a - 5|$? (5 , -5 , 0 , 10)

2- Answer each of the following:

8

- a** If the perimeter of the opposite triangle equals 34 length units , then what is the value of x ?



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- b** If $\frac{m}{3} = 7$, then what is the value of $m - 19$?

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- c** Find the solution set for each of the following equations in $\mathbb{Q}$:

a) $\frac{1}{3}x + 3 = 12$

b) $2(x + 3) = 3(1 - x)$

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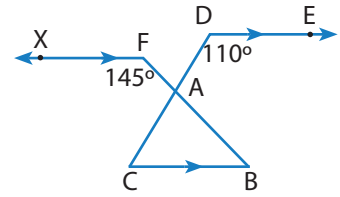
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d In the opposite figure:

$\overrightarrow{DE} \parallel \overrightarrow{FX} \parallel \overrightarrow{CB}$

, $m(\angle D) = 110^\circ$, $m(\angle F) = 145^\circ$



Calculate the measure of the interior angles of the triangle ABC.

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1- Choose the correct answer:

2

- a The result of adding the two expressions $-2y - x + 4z$ and $2x + 2y - 4z$ is
(x , $6z$, zero , $2x - 4y + 8z$)
- b The type of the angle that supplements an acute angle is a/an angle.
(acute , obtuse , straight , reflex)

2- Answer each of the following:

8

- a Two natural numbers, one of them is three times the other, and their sum is 48.

What are the two numbers?

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- b If the lengths of two sides of a triangle are 5 cm and 2 cm, **what is the largest integer that can represent the length of the third side?**

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- c In the opposite figure:

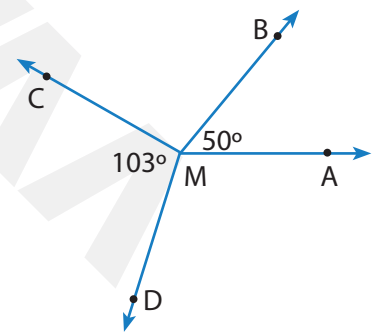
$$m(\angle BMC) = 2 m(\angle AMB), m(\angle AMB) = 50^\circ,$$

$$m(\angle DMC) = 103^\circ$$

Find: $m(\angle AMD)$

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- d Find the solution set of each of the following in $\mathbb{Z}$

$$3 - 3x = 19$$

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1- Choose the correct answer:

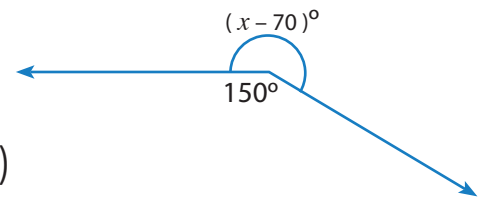
a The S.S of $\frac{1}{2}x + 4 = 5$ in $\mathbb{Q}$ is

($\{\frac{1}{2}\}$, {18} , {2} , $\emptyset$)

b In the opposite figure:

The value of $x =$

(270 , 280 , 140 , 220)



2- Answer each of the following:

a If my mother's age now is three times my age, and she is also 24 years older than me.

How old is each of us now?

Let the age be x years and the age of my mother be $3x$ years.

$$3x - x = 24$$

$$2x = 24$$

$$x = \frac{24}{2} = 12$$

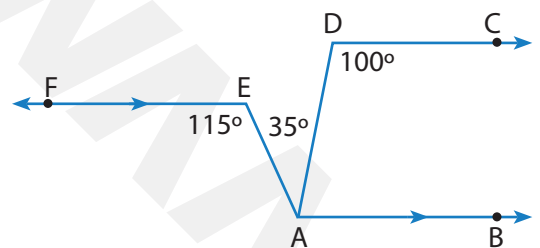
My age now is 12 years.

The mother's age now is 36 years.

b In the opposite figure:

$\overrightarrow{AB} \parallel \overrightarrow{EF}$, $m(\angle D) = 100^\circ$, $m(\angle E) = 115^\circ$
and $m(\angle DAE) = 35^\circ$

Prove that: $\overrightarrow{AB} \parallel \overrightarrow{DC}$



Proof:

$\overrightarrow{AB} \parallel \overrightarrow{EF}$, EA is a transversal.

$$\therefore m(\angle FEA) = m(\angle EAB) = 115^\circ$$

(alternating interior angles)

$$\therefore m(\angle DAB) = 115^\circ - 35^\circ = 80^\circ$$

$$\therefore m(\angle CDA) + m(\angle DAB) = 100^\circ + 80^\circ = 180^\circ$$

and they are interior angles and on one side of the transversal.

$$\therefore \overrightarrow{AB} \parallel \overrightarrow{DC}$$

- c** Write in the simplest form, the expression: $2(n - 3m) - 3(2n - 1)$,
and then find its value at: $m = -2, n = 2$

$$\begin{aligned}2(n - 3m) - 3(2n - 1) &= 2n - 6m - 6n + 3 \\&= -4n - 6m + 3\end{aligned}$$

The value at $m = -2, n = 2$ is $-4(2) - 6(-2) + 3 = -8 + 12 + 3 = 7$

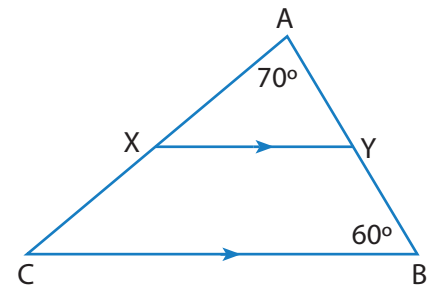
- d** In the opposite figure:

ABC is a triangle,

$Y \in \overline{AB}, X \in \overline{AC}, \overline{XY} \parallel \overline{CB}, m(\angle A) = 70^\circ$

and $m(\angle B) = 60^\circ$

Find : $m(\angle AXY)$ and $m(\angle YXC)$



Solution:

$\therefore \overline{CB} \parallel \overline{XY}, \overleftrightarrow{AB}$ is a transversal.

$\therefore m(\angle AYX) = m(\angle B) = 60^\circ$ (corresponding angles)

In $\triangle AXY$:

$\therefore m(\angle AXY) = 180^\circ - (70^\circ + 60^\circ) = 50^\circ$

$\therefore m(\angle AXY) + m(\angle YXC) = 180^\circ$

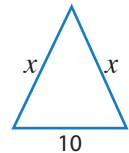
$\therefore m(\angle YXC) = 180^\circ - 50^\circ = 130^\circ$ (two adjacent supplementary angles)

1- Choose the correct answer:

- a** Two complementary angles, the ratio between their measures is $2 : 3$, then the measure of the greater angle is (18° , 36° , **54°** , 90°)
- b** If $\frac{a}{2} = 0.5$, what is the value of $|9a - 5|$? (**5** , -5 , 0 , 10)

2- Answer each of the following:

- a** If the perimeter of the opposite triangle equals 34 length units, then what is the value of x ?



The perimeter of the triangle = The sum of lengths of all its sides

$$x + x + 10 = 34$$

$$2x + 10 = 34$$

$$2x = 24$$

$$x = 12 \text{ length units}$$

- b** If $\frac{m}{3} = 7$, then what is the value of $m - 19$?

$$\therefore \frac{m}{3} = 7$$

$$\therefore m = 21$$

$$\text{Then } m - 19 = 21 - 19 = 2$$

- c** Find the solution set for each of the following equations in $\mathbb{Q}$:

a) $\frac{1}{3}x + 3 = 12$

b) $2(x + 3) = 3(1 - x)$

solution:

a) $\frac{1}{3}x + 3 = 12$

$$\frac{1}{3}x = 9$$

$$x = 27$$

$$\therefore \text{S.S} = \{27\}$$

b) $2(x + 3) = 3(1 - x)$

$$2x + 6 = 3 - 3x$$

$$2x + 3x = 3 - 6$$

$$5x = -3$$

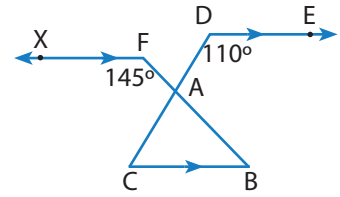
$$x = \frac{-3}{5}$$

$$\therefore \text{S.S} = \left\{ \frac{-3}{5} \right\}$$

d In the opposite figure:

$$\overrightarrow{DE} \parallel \overrightarrow{FX} \parallel \overrightarrow{CB}$$

$$, m(\angle D) = 110^\circ, m(\angle F) = 145^\circ$$



Calculate the measure of the interior angles of the triangle ABC.

solution:

$\therefore \overrightarrow{DE} \parallel \overrightarrow{CB}$ and $\overleftrightarrow{DC}$ is a transversal

$$\therefore m(\angle D) + m(\angle C) = 180^\circ \quad (\text{Two interior angles on the same side of the transversal})$$

$$\therefore m(\angle C) = 180^\circ - 110^\circ = 70^\circ$$

$\therefore \overrightarrow{CB} \parallel \overrightarrow{FX}$ and $\overleftrightarrow{FB}$ is a transversal

$$\therefore m(\angle F) + m(\angle B) = 180^\circ \quad (\text{Two interior angles on the same side of the transversal})$$

$$\therefore m(\angle B) = 180^\circ - 145^\circ = 35^\circ$$

In $\triangle ABC$:

$$\therefore m(\angle BAC) = 180^\circ - (70^\circ + 35^\circ) = 75^\circ$$

1- Choose the correct answer:

- a The result of adding the two expressions $-2y - x + 4z$ and $2x + 2y - 4z$ is
(x , $6z$, zero , $2x - 4y + 8z$)
- b The type of the angle that supplements an acute angle is a/an angle.
(acute , **obtuse** , straight , reflex)

2- Answer each of the following:

- a Two natural numbers, one of them is three times the other, and their sum is 48.

What are the two numbers?

Let the number be x and the other number be $3x$

$$x + 3x = 48$$

$$4x = 48$$

$$\therefore x = \frac{48}{4} = 12$$

The two numbers are 12 and 36

- b If the lengths of two sides of a triangle are 5 cm and 2 cm, **what is the largest integer that can represent the length of the third side?**

The largest integer of the length of the third side is 6 cm.

- c In the opposite figure:

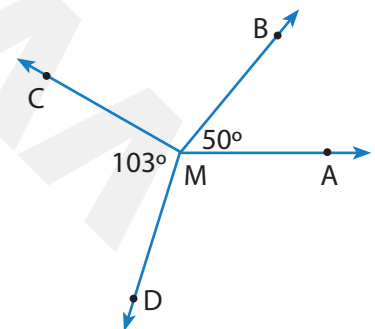
$$m(\angle BMC) = 2 m(\angle AMB), m(\angle AMB) = 50^\circ,$$

$$m(\angle DMC) = 103^\circ$$

Find: $m(\angle AMD)$

$$m(\angle BMC) = 2 m(\angle AMB) = 2 \times 50^\circ = 100^\circ$$

$$m(\angle AMD) = 360^\circ - (50^\circ + 100^\circ + 103^\circ) = 107^\circ$$



- d Find the solution set of each of the following in $\mathbb{Z}$

$$3 - 3x = 19$$

Solution:

$$3x = 3 - 19$$

$$3x = -16$$

$$\therefore x = \frac{-16}{3}$$

$$\therefore S.S = \emptyset$$

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

اختبار شهر نوفمبر



November Revision

First: Choose the correct answer:

1 If $x + 7 = 12$, then the value of $7x =$

- a** 5 **b** 14 **c** 21 **d** 35

2 If $9x = 36$, then the value of $6x =$

- a** 36 **b** 24 **c** 18 **d** 12

3 If $2x - 3 = 15$, then the value of $\frac{1}{3}x =$

- a** 18 **b** 12 **c** 9 **d** 3

4 The mathematical expression expresses that:

the sum of two consecutive even numbers equals 26 is

- a** $2x + 1 = 26$ **b** $2x + 2 = 26$ **c** $2x + 4 = 26$ **d** $2x - 4 = 26$

5 The mathematical expression expresses that:

the sum of two consecutive odd numbers equals 44 is

- a** $2x + 1 = 44$ **b** $4x + 2 = 44$ **c** $2x + 2 = 44$ **d** $2x - 4 = 44$

6 If $m(\angle A) = 70^\circ$, then $m(\angle A \text{ reflex}) =$ $^\circ$

- a** 140° **b** 240° **c** 270° **d** 290°

7 The mathematical expression expresses that: Abdulrahman's age after

10 years is 35, if his age now is x is

- a** $x - 10 = 35$ **b** $x + 10 = 35$ **c** $x - 25 = 35$ **d** $x + 10 = 45$

8 If the angles $\angle A$ and $\angle B$ are complementary and $m(\angle A) = 40^\circ$,

then $m(\angle B) =$

- a** 40° **b** 50° **c** 90° **d** 140°

9 What is the measure of the angle that supplements an angle of

measure $34^\circ 60''$?

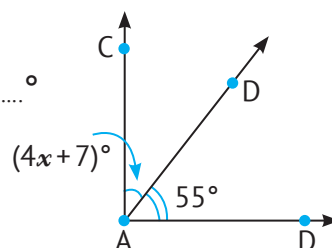
- a** 55° **b** 56° **c** 145° **d** 146°

- 10 The angle 68° complements angle of measure
- a 22° b 125° c 110° d 305°
- 11 The angle 23° supplements angle of measure
- a 23° b 67° c 157° d 337°
- 12 If $m(\angle X) = m(\angle Y)$, $\angle X$ complements $\angle Y$, then $m(\angle Y) =$
- a 90° b 45° c 180° d 360°
- 13 The sum of the measures of the interior angles of a triangle =
- a 90° b 120° c 180° d 360°
- 14 The sum of measures of the exterior angles of any triangle equals
- a 90° b 120° c 180° d 360°
- 15 In triangle ABC, if $m(\angle A) = 70^\circ$ and $m(\angle C) = 50^\circ$,
then $m(\angle B) =$
- a 40° b 50° c 60° d 70°
- 16 If the measures of the three angles in a triangle are equal, then the
measure of each angle is $^\circ$
- a 40° b 50° c 60° d 90°

17 In the opposite figure :

If $\overrightarrow{AB}$ is perpendicular to $\overrightarrow{AC}$, then $x =$ $^\circ$

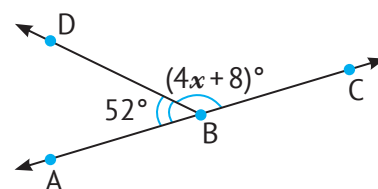
- a 35 b 28
c 14 d 7



18 In the opposite figure :

If A, B, C are on a straight line then $x =$ $^\circ$

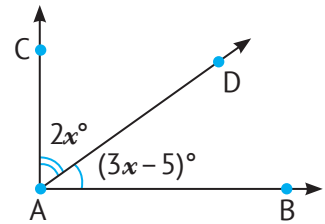
- a 28 b 30
c 32 d 38



19 In the opposite figure :

If $\overrightarrow{AB}$ is perpendicular to $\overrightarrow{AC}$, Then $x = \dots\dots\dots^\circ$

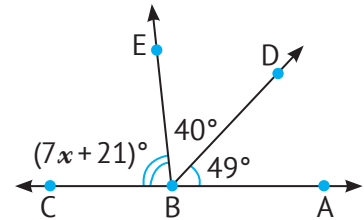
- a** 37 **b** 31
- c** 19 **d** 17



20 In the opposite figure :

If A, B, C are on a straight line, then $x = \dots\dots\dots^\circ$

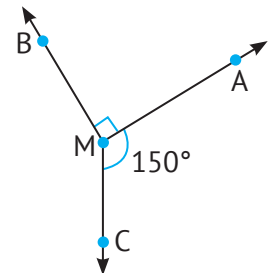
- a** 28 **b** 21
- c** 15 **d** 10



21 In the opposite figure :

$m(\angle BMC) = \dots\dots\dots^\circ$

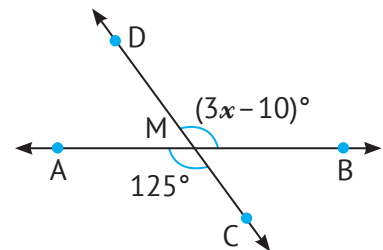
- a** 140 **b** 130
- c** 120 **d** 110



22 In the opposite figure :

Then $x = \dots\dots\dots^\circ$

- a** 28 **b** 21
- c** 15 **d** 45

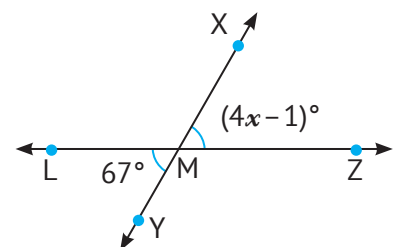


23 In the opposite figure :

$$\overleftrightarrow{XY} \cap \overleftrightarrow{LZ} = \{ M \}$$

Then $x = \dots\dots\dots^\circ$

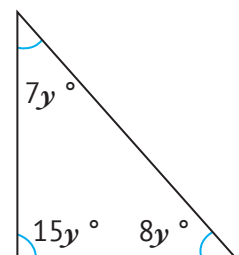
- a** 34 **b** 21
- c** 17 **d** 16.5



24 In the opposite figure :

$$y = \dots\dots\dots^\circ$$

- a** 10 **b** 9
- c** 6 **d** 5



25 In the opposite figure :

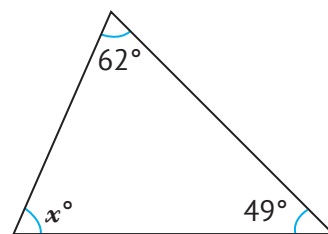
$$x = \dots\dots\dots^\circ$$

a 41

b 62

c 69

d 71



26 In the opposite figure :

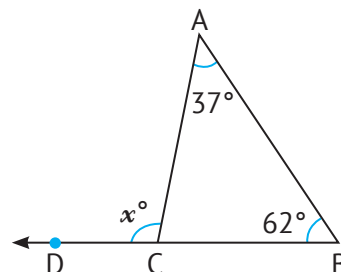
$$x = \dots\dots\dots^\circ$$

a 143

b 101

c 81

d 99



27 In the opposite figure :

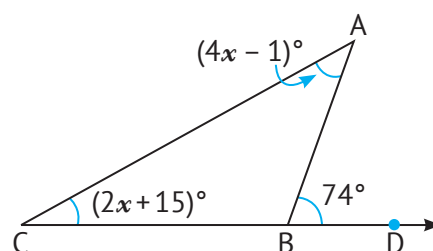
$$x = \dots\dots\dots^\circ$$

a 19

b 15

c 10

d 7



28 In the opposite figure :

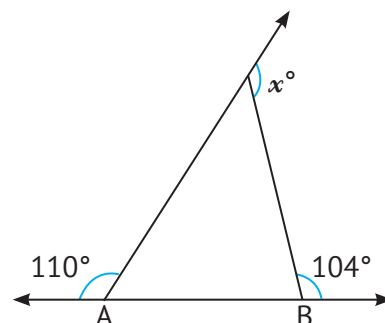
$$x = \dots\dots\dots^\circ$$

a 116

b 126

c 136

d 146



Second: Answer the following questions

- 1 Find the solution set of the equation: $2x + 4 = 10$, if the substitution set is $\{4, 5, 3\}$

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- 2 Find the solution set of the equation: $3x - 6 = 15$, if the substitution set is $\{6, 7, 8\}$

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- 3 Find the solution set of the following equations in N :

a $4 + 5x = 14$

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b $(x + 4) = 2$

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- 4 Find the solution set of the following equations in Z :

a $3x - 5 = 11$

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b $5x + 4 = -6$

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- 5 Find the solution set of the following equations in Q :

a $5x + 4 = -14$

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b $2x + 9 = 12$

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c $5(x - 4) = 20$

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d $4(x + 2) = 16$

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e $4 - 3x = 19$

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f $2x + 5 = 12 + 3x$

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- 6 If the perimeter of the opposite triangle equals **10** cm ,
then find the value of x in centimeters.

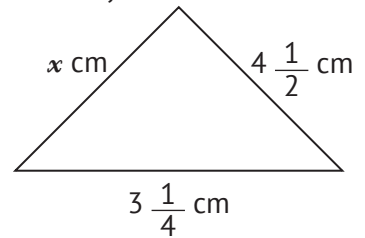
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- 7 If the perimeter of the opposite figure equals **35** cm
, then find the value of x in centimeters.

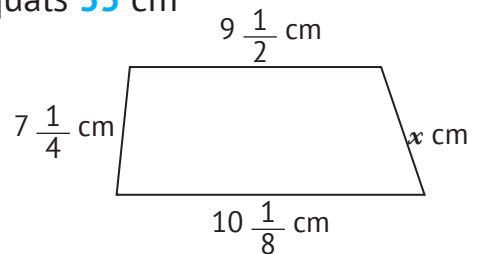
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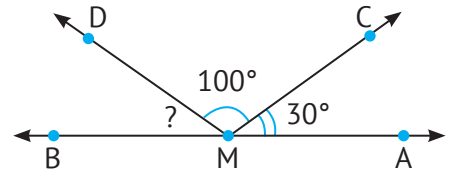
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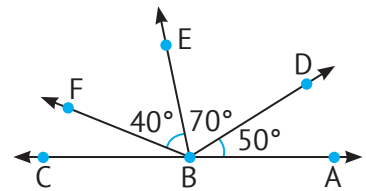
8 In the opposite figure : $M \in \overleftrightarrow{AB}$, $m(\angle AMC) = 30^\circ$

$m(\angle CMD) = 100^\circ$, find: $m(\angle DMB)$



9 In the opposite figure : $B \in \overleftrightarrow{AC}$,

find: $m(\angle FBC)$

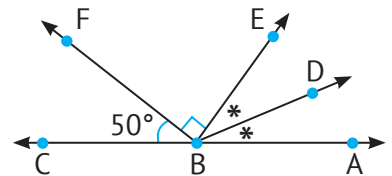


10 In the opposite figure : $m(\angle FBE) = 90^\circ$,

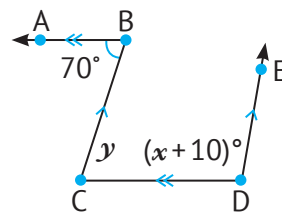
$B \in \overleftrightarrow{AC}$, $m(\angle CBF) = 50^\circ$,

$\overleftrightarrow{BD}$ bisects $\angle ABE$.

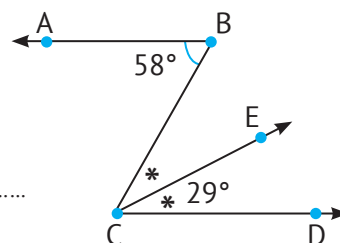
Find: $m(\angle ABD)$



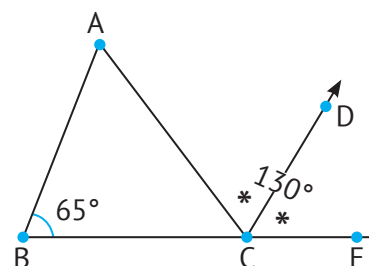
- 11 In the opposite figure : $\overrightarrow{BA} \parallel \overrightarrow{DC}$, $\overrightarrow{DE} \parallel \overrightarrow{CB}$,
 $m(\angle ABC) = 70^\circ$. Find the measure of each x and y



- 12 In the opposite figure : $\overrightarrow{CE}$ Bisect $\angle BCD$
 Prove that : $\overrightarrow{BA} \parallel \overrightarrow{DC}$



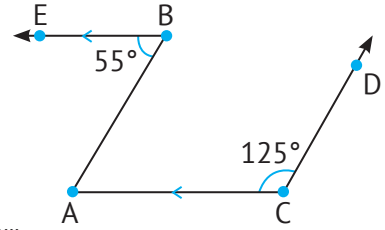
- 13 In the opposite figure : $\overrightarrow{CD}$ Bisect $\angle ACE$
 $m(\angle ACE) = 130^\circ$
 Prove that : $\overrightarrow{BA} \parallel \overrightarrow{CD}$



14 In the opposite figure :

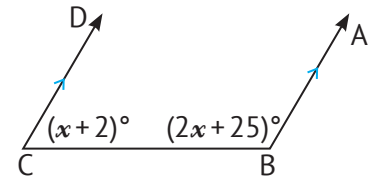
$$\overrightarrow{CA} \parallel \overrightarrow{BE}, m(\angle B) = 55^\circ, m(\angle C) = 125^\circ$$

Prove that: $\overrightarrow{AB} \parallel \overrightarrow{CD}$



15 In the opposite figure :

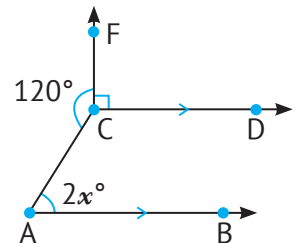
$$\overrightarrow{CD} \parallel \overrightarrow{BA}, \text{ Find the measure of } x$$



16 In the opposite figure :

$$\overrightarrow{CD} \parallel \overrightarrow{AB}, m(\angle ACF) = 120^\circ, m(\angle DCF) = 90^\circ$$

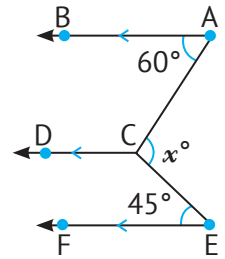
Find the measure of x



17 In the opposite figure :

$\overrightarrow{AB} \parallel \overrightarrow{CD} \parallel \overrightarrow{EF}$, $m(\angle A) = 60^\circ$, $m(\angle E) = 45^\circ$

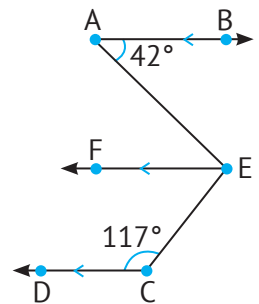
Find the measure of x



18 In the opposite figure: $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD} \parallel \overleftrightarrow{EF}$

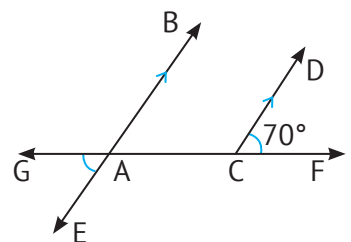
, $m(\angle A) = 42^\circ$, $m(\angle C) = 117^\circ$

Find by proof: $m(\angle AEC)$



19 In the opposite figure: $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$

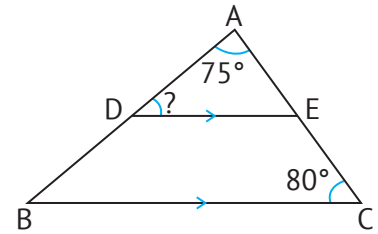
$m(\angle DCF) = 70^\circ$. Find by proof : $m(\angle GEA)$



20 In the opposite figure: $\overleftrightarrow{DE} \parallel \overleftrightarrow{BC}$,

$$m(\angle A) = 75^\circ, m(\angle C) = 60^\circ$$

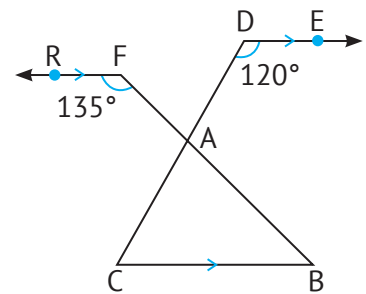
Find by proof: $m(\angle ADE)$



21 In the opposite figure: $\overleftrightarrow{DE} \parallel \overleftrightarrow{CB} \parallel \overleftrightarrow{FR}$

$$, m(\angle EDC) = 120^\circ, m(\angle RFB) = 135^\circ$$

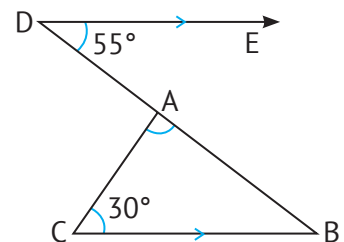
Find by proof the measures of the interior angles of the triangle ABC



22 In the opposite figure: $\overleftrightarrow{DE} \parallel \overleftrightarrow{CB}$

$$, m(\angle EDB) = 55^\circ, m(\angle C) = 30^\circ$$

Find by proof: $m(\angle BAC)$



- 23 Try to draw a triangle with 7cm, 5cm, 5cm sides. Do you can draw it?

Discuss?

- 24 Try to draw a triangle with 8cm, 4cm, 3cm sides. Do you can draw it?

Discuss?

- 25 Try to draw a triangle with 6cm, 4cm, 2cm sides. Do you can draw it?

Discuss?

Guide Answers

First

- | | | |
|-----------------|-----------------|---------------|
| 1 35 | 2 24 | 3 3 |
| 4 $2x + 2 = 26$ | 5 $2x + 2 = 44$ | 6 290° |
| 7 $x + 10 = 35$ | 8 50° | 9 145° |
| 10 22° | 11 157° | 12 45° |
| 13 180° | 14 360° | 15 60° |
| 16 60° | 17 7 | 18 30 |
| 19 19 | 20 10 | 21 120 |
| 22 45 | 23 17 | 24 6 |
| 25 69 | 26 99 | 27 10 |
| 28 146 | | |

Second

- 1 At $x = 4$ $\therefore 2 \times 4 + 4 = 12$ does not solution
 At $x = 5$ $\therefore 2 \times 5 + 4 = 14$ does not solution
 At $x = 3$ $\therefore 2 \times 3 + 4 = 10$ is solution
 The solution set = $\{3\}$
- 2 At $x = 6$ $\therefore 3 \times 6 - 6 = 12$ does not solution
 At $x = 7$ $\therefore 3 \times 7 - 6 = 15$ is solution
 At $x = 8$ $\therefore 3 \times 8 - 6 = 18$ does not solution
 The solution set = $\{7\}$

3 a $5x + 4 - 4 = 14 - 4$

$$5x = 10$$

$$\frac{5x}{5} = \frac{10}{5} \quad \therefore x = 2 \in \mathbb{N}$$

$$\text{S.S.} = \{2\}$$

b $x + 4 - 4 = 2 - 4$

$$x = -2 \notin \mathbb{N}$$

$$\text{S.S.} = \emptyset$$

4 a $3x - 5 + 5 = 11 + 5$

$$3x = 16$$

$$\frac{3x}{3} = \frac{16}{3} \quad \therefore x = \frac{16}{3} \notin \mathbb{Z}$$

$$\text{S.S.} = \emptyset$$

b $5x + 4 - 4 = 6 - 4$

$$5x = -10$$

$$\frac{5x}{5} = \frac{-10}{5} \quad \therefore x = -2 \in \mathbb{Z}$$

$$\text{S.S.} = \{-2\}$$

5 a $5x + 4 - 4 = -14 - 4$

$$5x = -18$$

$$\frac{5x}{5} = \frac{-18}{5} \quad \therefore x = \frac{-18}{5} \in \mathbb{Q}$$

$$\text{S.S.} = \left\{\frac{-18}{5}\right\}$$

b $2x + 9 - 9 = 12 - 9$

$$2x = 3$$

$$\frac{2x}{2} = \frac{3}{2} \quad \therefore x = \frac{3}{2} \in \mathbb{Q}$$

$$\text{S.S.} = \left\{\frac{3}{2}\right\}$$

c $5x - 20 + 20 = 20 + 20$

$$5x = 40$$

$$\frac{5x}{5} = \frac{40}{5} \quad \therefore x = 8 \in \mathbb{Q}$$

$$\text{S.S.} = \{8\}$$

d $4x + 8 - 8 = 16 - 8$

$$4x = 8$$

$$\frac{4x}{4} = \frac{8}{4} \quad \therefore x = 2 \in \mathbb{Q}$$

$$\text{S.S.} = \{2\}$$

e $4 - 3x - 4 = 19 - 4$

$$-3x = 15$$

$$\frac{-3x}{-3} = \frac{15}{-3} \quad \therefore x = -5 \in \mathbb{Q}$$

$$\text{S.S.} = \{-5\}$$

f $2x + 5 - 5 = 12 + 3x - 5$

$$2x - 3x = 7 + 3x - 3x$$

$$-x = 7 \quad \therefore x = -7 \in \mathbb{Q}$$

$$\text{S.S.} = \{-7\}$$

6 $x + 4 \frac{1}{2} + 3 \frac{1}{4} = 10$

$$x + 7 \frac{3}{4} = 10$$

$$x = 10 - 7 \frac{3}{4} = 2 \frac{1}{4} \text{ cm}$$

$$7 \quad x + 9 \frac{1}{2} + 7 \frac{1}{4} + 10 \frac{1}{8} = 35$$

$$x + 26 \frac{7}{8} = 35$$

$$x = 35 - 26 \frac{7}{8} = 8 \frac{1}{8} \text{ cm}$$

$$8 \quad m(\angle AMC) + m(\angle CMD) + m(\angle DMB) = 180^\circ$$

$$\therefore m(\angle DMB) = 180^\circ - [100^\circ + 30^\circ] = 50^\circ$$

$$9 \quad m(\angle ABD) + m(\angle DBE) + m(\angle EBF) + m(\angle FBC) = 180^\circ$$

$$\therefore m(\angle FBC) = 180^\circ - [50^\circ + 70^\circ + 40^\circ] = 20^\circ$$

$$10 \quad m(\angle ABD) + m(\angle DBE) + m(\angle EBF) + m(\angle FBC) = 180^\circ$$

$$\therefore m(\angle ABD) + m(\angle DBE) = 180^\circ - [50^\circ + 90^\circ] = 40^\circ$$

$$\therefore m(\angle ABD) = m(\angle DBE) = 40^\circ \div 2 = 20^\circ$$

$$11 \quad \overrightarrow{BA} \parallel \overrightarrow{DC}$$

$$m(\angle ABC) = m(\angle BCD) = 70^\circ \quad \text{"Alternate angles"}$$

$$\therefore y = 70^\circ$$

$$\overrightarrow{DE} \parallel \overrightarrow{CB}$$

$$m(\angle CDE) + m(\angle BCD) = 180^\circ \quad \text{"Interior"}$$

$$m(\angle CDE) = 180^\circ - 70^\circ = 110^\circ$$

$$\therefore x + 10^\circ = 110^\circ \quad \therefore x = 100^\circ$$

$$12 \quad m(\angle BCD) = 2 \times 29^\circ = 58^\circ$$

$$\therefore m(\angle ABC) = m(\angle BCD) = 58^\circ$$

"They are Alternate angles"

$$\therefore \overrightarrow{BA} \parallel \overrightarrow{DC}$$

$$13 \quad m(\angle ECD) = 130^\circ \div 2 = 65^\circ$$

$$\therefore m(\angle ABC) = m(\angle ECD) = 65^\circ$$

"They are corresponding angles"

$$\therefore \overrightarrow{BA} \parallel \overrightarrow{DC}$$

$$14 \quad \overrightarrow{CA} \parallel \overrightarrow{BE}$$

$$m(\angle B) = m(\angle A) = 55^\circ \quad \text{"Alternate angles"}$$

$$m(\angle A) = m(\angle C) = 55^\circ + 125^\circ = 180^\circ$$

"They are interior"

$$\therefore \overrightarrow{AB} \parallel \overrightarrow{CD}$$

$$15 \quad \overrightarrow{CD} \parallel \overrightarrow{BA}$$

$$m(\angle B) + m(\angle$$

"Interior angles"

$$2x + 25^\circ + x + 2^\circ =$$

$$3x + 27^\circ = 180^\circ$$

$$3x + 27^\circ = 180^\circ$$

$$3x = 180^\circ - 27 = 153^\circ$$

$$x = 153^\circ \div 3 = 51^\circ$$

$$16 \quad m(\angle ACD) + m(\angle DCF) + m(\angle ACF) = 360^\circ$$

"accumulative angles"

$$\therefore m(\angle ACD) = 360^\circ - [120^\circ + 90^\circ] = 150^\circ$$

$$\overrightarrow{CD} \parallel \overrightarrow{AB}$$

$$m(\angle ACD) + m(\angle A) = 180^\circ$$

"Interior angles"

$$2x + 150^\circ = 180^\circ$$

$$2x = 180^\circ - 150^\circ = 30^\circ$$

$$\therefore x = 15^\circ$$

$$17 \quad \overrightarrow{CD} \parallel \overrightarrow{AB}$$

$$m(\angle ACD) + m(\angle A) = 180^\circ$$

"Interior angles"

$$\therefore m(\angle ACD) = 180^\circ - 60^\circ = 120^\circ$$

$$\overrightarrow{CD} \parallel \overrightarrow{EF}$$

$$m(\angle ECD) + m(\angle E) = 180^\circ$$

"Interior angles"

$$m(\angle ECD) = 180^\circ - 45^\circ = 135^\circ$$

$$\therefore m(\angle ECD) + m(\angle ACD) + m(\angle ACE) = 360^\circ$$

"accumulative"

$$\therefore m(\angle ACE) = 360^\circ - [120^\circ + 135^\circ] = 105^\circ$$

$$\therefore x = 105^\circ$$

$$18 \quad \overleftrightarrow{CD} \parallel \overleftrightarrow{AB}$$

$$m(\angle BAE) = m(\angle AEF) = 42^\circ$$

"Alternative angles"

$$\overleftrightarrow{CD} \parallel \overleftrightarrow{EF}$$

$$m(\angle ECD) + m(\angle CEF) = 180^\circ$$

"Interior angles"

$$\therefore m(\angle CEF) = 180^\circ - 117^\circ = 63^\circ$$

$$\therefore m(\angle AEC) = 42^\circ + 63^\circ = 105^\circ$$

$$19 \quad \overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$$

$$m(\angle BAC) = m(\angle DCF) = 70^\circ$$

"Corresponding angles"

$$m(\angle BAC) = m(\angle GAE) = 70^\circ$$

"V.O.A"

$$20 \quad \text{In } \triangle ABC$$

$$m(\angle A) + m(\angle B) + m(\angle C) = 180^\circ \quad \text{"interior angles"}$$

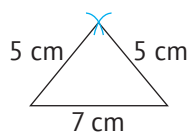
$$\therefore m(\angle B) = 180^\circ - [60^\circ + 75^\circ] = 45^\circ$$

$$\overleftrightarrow{DE} \parallel \overleftrightarrow{BC}$$

$$\therefore m(\angle ADE) = m(\angle B) = 45^\circ \quad \text{"corresponding angles"}$$

- 21 $\overrightarrow{DE} \parallel \overrightarrow{CB}$
 $\therefore m(\angle CDE) + m(\angle C) = 180^\circ$ "Interior angles"
 $m(\angle C) = 180 - 120^\circ = 60^\circ$
 $\overleftrightarrow{FR} \parallel \overleftrightarrow{CB}$
 $\therefore m(\angle BFR) + m(\angle B) = 180^\circ$ "Interior angles"
 $m(\angle B) = 180 - 135^\circ = 45^\circ$
 In $\triangle ABC$
 $m(\angle BAC) + m(\angle B) + m(\angle C) = 180^\circ$ "interior angles"
 $\therefore m(\angle BAC) = 180^\circ - [60^\circ + 45^\circ] = 75^\circ$
- 22 $\overrightarrow{DE} \parallel \overrightarrow{CB}$
 $\therefore m(\angle B) = m(\angle EDB) = 44^\circ$ "Alternate angles"
 In $\triangle ABC$
 $m(\angle BAC) = m(\angle B) + m(\angle C) = 180^\circ$ "Interior angles"
 $\therefore m(\angle BAC) = 180^\circ - [55^\circ + 30^\circ] = 95^\circ$

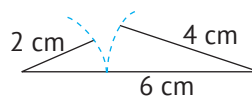
- 23 Yes, I can to draw because: $5 + 5 > 7$



- 24 No, I cannot draw because: $3 + 4 < 8$



- 25 No, I cannot draw because: $2 + 4 = 6$



حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

اختبار شهر نوفمبر



Math prep 1

2026



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MATH TEACHER

Algebra

Unit 2

Lessons 1,2,3

1 Choose the correct answer.

(1) $a + a + a = \dots\dots\dots$

☐ (A) $3a^3$

☐ (B) a^3

☐ (C) $3 + a$

☐ (D) $3a$

(2) $y + y + y + y = \dots\dots\dots$

☐ (A) y^4

☐ (B) $4y$

☐ (C) $4 + y$

☐ (D) $4y^4$

(3) $5x + (-3x) = \dots\dots\dots$

☐ (A) $8x$

☐ (B) $2x$

☐ (C) $-2x$

☐ (D) $-8x$

(4) Which of the following pairs of terms are like terms?

☐ (A) $2x, -2x^2$

☐ (B) $3a, 8a$

☐ (C) $7x, 7$

☐ (D) x^2, y^2

(5) What is the mathematical formula representing the area (A) of a parallelogram with a base length (ℓ) and its corresponding height (h)?

☐ (A) $A = \frac{1}{2}\ell h$

☐ (B) $A = \ell h$

☐ (C) $A = \ell + h$

☐ (D) $A = \frac{\ell}{h}$

(6) What is the suitable equation to find the side length of an equilateral triangle whose perimeter is 12 cm?

☐ (A) $x + 3 = 12$

☐ (B) $3x = 12$

☐ (C) $2x = 12$

☐ (D) $x = 12$

(7) The algebraic term $-5x$ exceeds the algebraic term $-11x$ by $\dots\dots\dots$

☐ (A) $-16x$

☐ (B) $6x$

☐ (C) $-6x$

☐ (D) $16x$

(8) The number of terms in the algebraic expression: $6n - 5n^2 - 9$ is $\dots\dots\dots$

☐ (A) 5

☐ (B) 3

☐ (C) 2

☐ (D) 4

(9) Which of the following are like terms?

☐ (A) $2y, -2y^2$

☐ (B) y^2, x^2

☐ (C) $2y, -3y$

☐ (D) $5, -3y$

(10) The constant term in the algebraic expression: $3x - 7y - 5xy - 7$ is $\dots\dots\dots$

☐ (A) $3x$

☐ (B) $-7y$

☐ (C) $-5xy$

☐ (D) -7

(11) Which of the following are like terms?

- (A) $3x, 7x$ (B) $5xy, 7yx^2$ (C) $5x, 5$ (D) $13a^2, 7a$

(12) The result of adding the two expressions: $2x - 1$ and $-3x + 5$ is

- (A) $-5x + 4$ (B) $x - 4$ (C) $4 - x$ (D) $x + 4$

(13) The expression: $2x + 3y$ exceeds $3y - 2x$ by

- (A) $-6y$ (B) $4x$ (C) $-4x$ (D) $6y$

(14) The result of adding the two expressions: $-2y - x - 3z$ and $x + 2y - 3z$ is ...

- (A) $-6z$ (B) zero (C) $6z$ (D) $2x - 4y + 6z$

(15) The additive inverse of the expression: $3x - 2y + 8$ is

- (A) $-3x - 2y + 8$ (B) $-3x + 2y + 8$ (C) $-3x + 2y - 8$ (D) $3x + 2y - 8$

(16) $+(2x - 3y) = -x + y - 4$

- (A) $x - 2y - 4$ (B) $-3x + 4y + 4$ (C) $-4 - 3x + 4y$ (D) $4y + 3x + 4$

(17) $(4x - 3y + 2) - (\dots\dots\dots) = y + x - 5$

- (A) $3x - 4y + 3$ (B) $3x - 4y + 7$ (C) $3y + 4x + 7$ (D) $-2y + 5x - 3$

(18) $(\dots\dots\dots) - (a - 3b + c) = -4c - 2b$

- (A) $a - b + 5c$ (B) $-5c + b - a$ (C) $a - b + 5c$ (D) $-3c - 5b + a$

(19) $(17 - 3x + 5y) + (\dots\dots\dots) = 15 - y$

- (A) $3x - 2 - 4y$ (B) $-2 - 6y$ (C) $3x - 6y - 2$ (D) $6y + 3x - 2$

(20) If the age of Khadija now is y years old, then her age 10 years ago is.....

- (A) $y + 10$ (B) $y - 10$ (C) $10 - y$ (D) $10 + y$

(21) The result of subtracting: $7y - 6$ from $3y + 7$ is.....

- (A) $10y + 1$ (B) $-4y - 1$ (C) $4y + 1$ (D) $-4y + 13$

(22) The result of adding the expressions: $2x - 4y + 6$ and $-3x + 4y - 6$ is.....

- (A) $5x + 8y + 12$ (B) $-x$ (C) $-x + 8y$ (D) $-x - 12$

(23) The result of adding the two expressions: $5b - 3a$ and $5a - 3b$ is

- (A) $10a - 6b$ (B) $2a + 2b$ (C) $8a + 8b$ (D) $-8a + 2b$

(24) $x + 3 = 10$ is a equation.

- (A) Linear (B) Quadratic (C) Cubic (D) other

(25) $x^2 + 3 = 10$ is a equation.

- (A) Linear (B) Quadratic (C) Cubic (D) other

(26) $x^3 + 3 = 10$ is a equation.

- (A) Linear (B) Quadratic (C) Cubic (D) other

(27) $x^3 + 3y - z^2 = 10$ is a equation.

- (A) Linear (B) Quadratic (C) Cubic (D) other

(28) If $2X = 2$, then $(3X - 1) = \dots\dots\dots$

- (A) 1 (B) 2 (C) 3 (D) 4

(29) If $3(x - 2) = 12$, then $5x = \dots\dots\dots$

- (A) 5 (B) 10 (C) 20 (D) 30

(30) If $2x = 6$, then $4x + 1 = \dots\dots\dots$

- (A) 5 (B) 13 (C) 25 (D) 30

(31) If $4(x + 2) = 12$, and the substitution set is $\{2, 3, 4\}$,
then the solution set =

- (A) $\{1\}$ (B) $\{2\}$ (C) $\{3\}$ (D) $\emptyset$

(32) The solution set of the equation: $3X - 1 = 4$ in $\mathbb{N}$ is

- (A) $\{3\}$ (B) $\{4\}$ (C) $\{\frac{5}{3}\}$ (D) $\emptyset$

(33) The solution set of the equation: $3X - 1 = 4$ in $\mathbb{Z}$ is

- (A) $\{3\}$ (B) $\{4\}$ (C) $\{\frac{5}{3}\}$ (D) $\emptyset$

(34) The solution set of the equation: $3X - 1 = 4$ in $\mathbb{Q}$ is

- (A) $\{3\}$ (B) $\{4\}$ (C) $\{\frac{5}{3}\}$ (D) $\emptyset$

(35) What the solution set of the equation $3(x - 2) = x$ in $\mathbb{Z}$?

(A) $\{2\}$

(B) $\{3\}$

(C) $\{4\}$

(D) $\{5\}$

(36) Which of the following equations does not have a solution in $\mathbb{Z}$?

(A) $6X = 12$

(B) $6X = 15$

(C) $6X = 18$

(D) $6X = 24$

(37) Which of the following represents a solution to the equation:

$2(x - 5) = 0$ in $\mathbb{Q}$?

(A) 0

(B) 5

(C) -5

(D) 10

(38) The length of the base of a parallelogram is 15 cm and its corresponding height is $(2x + 3)$ cm , if its area is 135 square centimeters , then $x = \dots\dots\dots$

(A) 2

(B) 3

(C) 4

(D) 5

(39) Two consecutive odd numbers add up to 28. Which of the following equations expresses this ?

(A) $x + x + 1 = 28$

(B) $2x + 1 = 28$

(C) $2x - 1 = 28$

(D) $2x + 2 = 28$

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2**Answer the following questions**

1- Add: $2x + 3y - 5$ and $x - y + 8$

.....

.....

2- Find the sum of the following: $2x - y + 4$ and $5x + 4y - 6$

.....

.....

3- Find the result of subtracting: $-4x + 3y + 8$ from $5x + 8y - 3$

.....

.....

4- If $2x + 3 = 1$, then what is the value of $x - 7$?

.....

.....

5- If $5k = 20$, what is the value of: $3k + 1$?

.....

.....

6- Add the two algebraic expressions: $3x + 2y$ and $5y - 6x + 2$, then find the numerical value of the result when $x = 3$, $y = -1$

.....

.....

.....

.....

7- Simplify the expression: $3(a - 2b) - 2(a + b)$, then find the value of the expression if $a = 5$ and $b = -1$

.....

.....

.....

8- What is the increase of: $3x - 6y + 4$ than $3x + y - 3$?

.....

.....

9- What is the decrease of: $x + 2y - 3z$ than $3y - 3z + 10x$?

.....

.....

10- Find the solution set of the equation: $-2(x + 1) = 3$ in $\mathbb{N}$

.....

.....

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11- Find the solution set of the equation: $3(x - 2) = 5x - 10$ in $\mathbb{N}$

.....

.....

12- Find the solution set of the equation: $5x + 2 = 12$ in $\mathbb{Z}$

.....

.....

13- Find the solution set of the equation: $5x + 1 = -9$ in $\mathbb{Z}$

.....

.....

14- Find the solution set of the equation: $3(x - 2) = 18$ in $\mathbb{Z}$

.....

.....

15- Find the solution set of the equation: $2x + 5 = 7$ in $\mathbb{Q}$

.....

.....

16- Find the solution set of the equation: $3x + 2 = -7$ in $\mathbb{Q}$

.....

.....

17- Find the solution set of the equation: $5x + 14 = 4 + 3x$ in $\mathbb{Q}$

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18- Find two consecutive odd numbers their sum is 92?

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19- Find three consecutive even numbers their sum is 84?

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20- Find three consecutive numbers their sum is 123?

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Math prep 1

2026



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Geometry

Unit 4

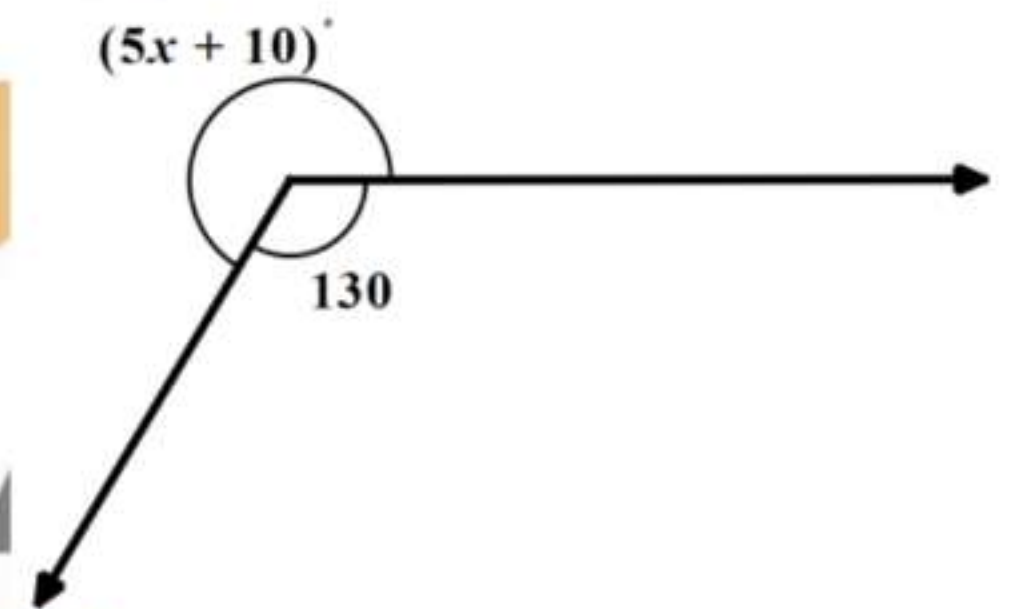
Lessons 1,2

1 Choose the correct answer.

- 1) The sum of two complementary angles = °.
☐ (A) 30 ☐ (B) 90 ☐ (C) 180 ☐ (D) 360
- 2) The sum of two supplementary angles =°.
☐ (A) 30 ☐ (B) 90 ☐ (C) 180 ☐ (D) 360
- 3) What is the measure of the angle that complements an angle of measure 68°?
☐ (A) 22° ☐ (B) 125° ☐ (C) 110° ☐ (D) 305°
- 4) If $m(\angle x) = m(\angle y)$ and $\angle x$ complements $\angle y$, what is the measure of $\angle y$?
☐ (A) 45° ☐ (B) 90° ☐ (C) 180° ☐ (D) 360°
- 5) What is the measure of the angle that supplements an angle of measure 23 °?
☐ (A) 23° ☐ (B) 67° ☐ (C) 157° ☐ (D) 337°
- 6) If $m(\angle x) = m(\angle y)$ and $\angle x$ supplements $\angle y$, what is the measure of $\angle y$?
☐ (A) 45° ☐ (B) 90° ☐ (C) 180° ☐ (D) 360°
- 7) If $\angle x$ and $\angle y$ are supplementary angle, and $m(\angle x) = 3m(\angle y)$ what is the measure of $\angle x$?
☐ (A) 45° ☐ (B) 90° ☐ (C) 135° ☐ (D) 180°
- 8) What is the type of the angle complement an zero angle?
☐ (A) Zero ☐ (B) Acute ☐ (C) Right ☐ (D) Obtuse
- 9) What is the type of the angle complement an acute angle?
☐ (A) Zero ☐ (B) Acute ☐ (C) Right ☐ (D) Obtuse
- 10) What is the type of the angle complement an Right angle?
☐ (A) Zero ☐ (B) Acute ☐ (C) Right ☐ (D) Obtuse
- 11) What is the type of the angle supplements an zero angle?
☐ (A) Zero ☐ (B) Acute ☐ (C) Obtuse ☐ (D) Straight
- 12) What is the type of the angle supplements an acute angle?
☐ (A) Zero ☐ (B) Acute ☐ (C) Obtuse ☐ (D) Straight

- 13) What is the type of the angle supplements an obtuse angle?
 (A) Zero (B) Acute (C) Obtuse (D) Straight
- 14) What is the type of the angle supplements an Straight angle?
 (A) Zero (B) Acute (C) Obtuse (D) Straight
- 15) $m(\angle A) + m(\text{reflex } \angle A)$ equals the measure of
 (A) 45° (B) 90° (C) 180° (D) 360°
- 16) $m(\angle A) + m(\text{reflex } \angle A)$ equals the measure of
 (A) Two right angles (B) Three right angles
 (C) Four right angles (D) Five right angles
- 17) if $m(\angle A) = 36^\circ 60'$, then the reflex of $m(\angle A) = \dots\dots\dots$
 (A) 37° (B) 53° (C) 143° (D) 323°

- 18) In the opposite figure:
 What is the value of x ?



- (A) 230° (B) 220° (C) 44° (D) 22°
- 19) The two adjacent angles whose outer sides are perpendicular to each other are
 (A) Complementary (B) Supplementary
 (C) perpendicular (D) parallel
- 20) The outer side of two adjacent complementary angles are
 (A) perpendicular (B) parallel
 (C) coinciding (D) Forming an acute angle

21) The two adjacent angles whose outer sides are lie on a straight line are

- (A) Complementary (B) Supplementary
(C) perpendicular (D) parallel

22) The outer side of two adjacent supplementary angles are lies on

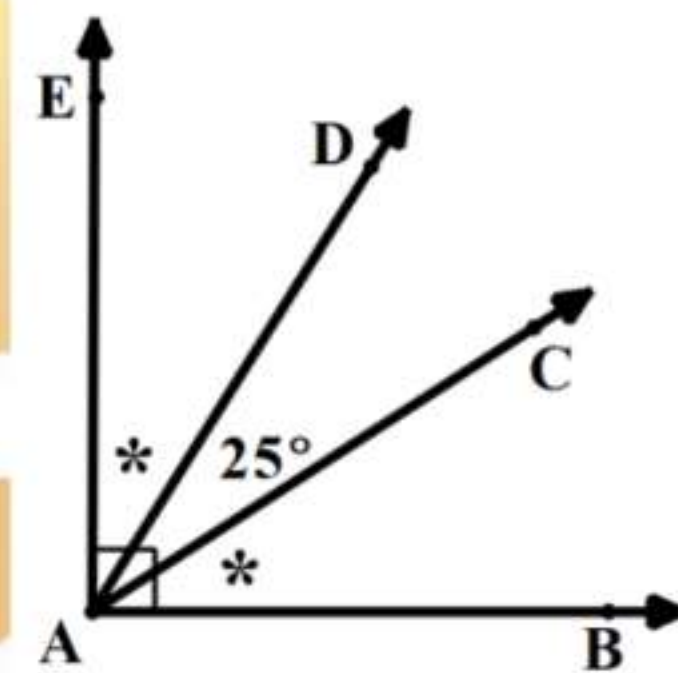
- (A) straight line (B) parallel
(C) coinciding (D) Forming an acute angle

23) If $\overrightarrow{BA} \perp \overrightarrow{BC}$, then what is the measure of angle $\angle ABC$?

- (A) 40° (B) 90° (C) 180° (D) 360°

24) In the opposite figure:

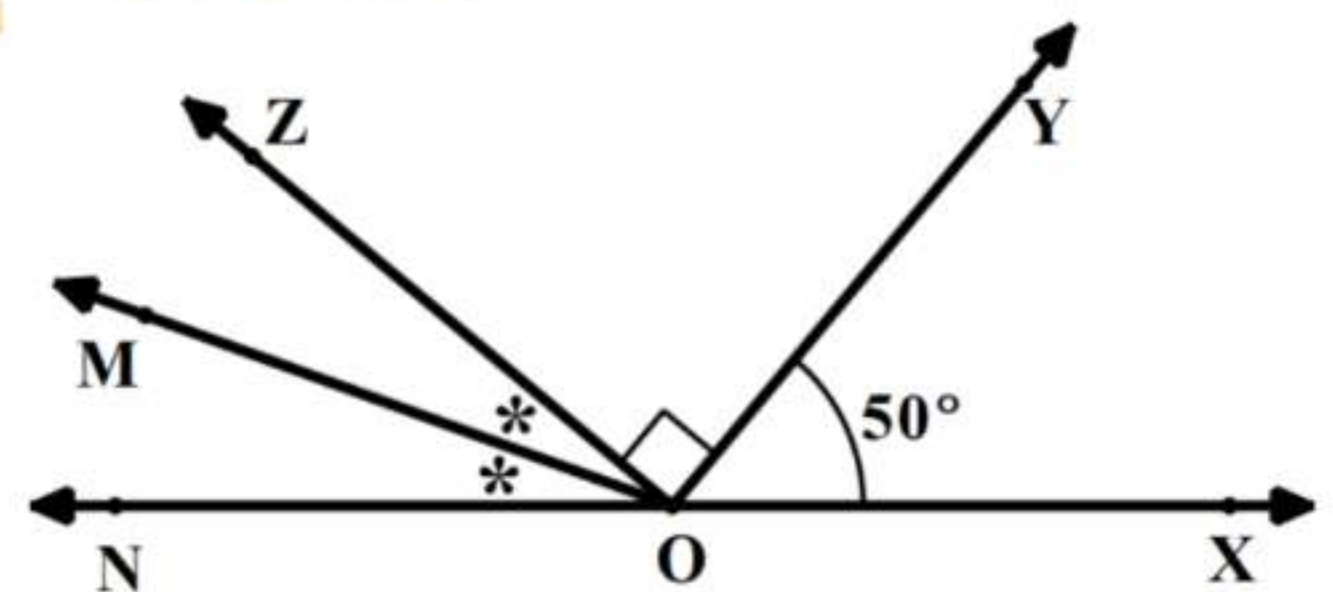
If $\overrightarrow{AB} \perp \overrightarrow{AE}$
, then $m(\angle BAD) = \dots$



- (A) 32.5° (B) 57.5° (C) 65° (D) 67°

25) In the opposite figure:

If $O \in \overleftrightarrow{XN}$,
then $m(\angle MOX) = \dots$



- (A) 20° (B) 70° (C) 140° (D) 160°

26) Each Two vertically opposite angles are

- (A) Complementary (B) Supplementary
(C) Equal in measure (D) parallel

27) The angle with a measure of 60° has a vertically opposite angle with a measure of

- (A) 30° (B) 60° (C) 90° (D) 180°

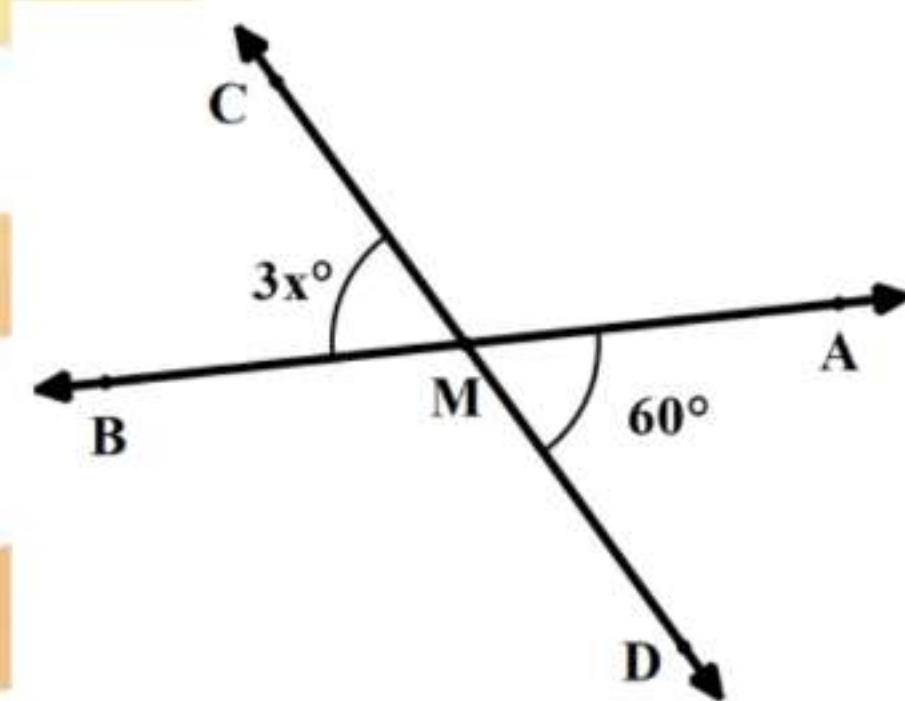
28) If the vertically opposite angles are complementary, then the measure of each is

- (A) 45° (B) 50° (C) 90° (D) 180°

29) In the opposite figure:

$$\text{If } \overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$$

What is the value of x ?

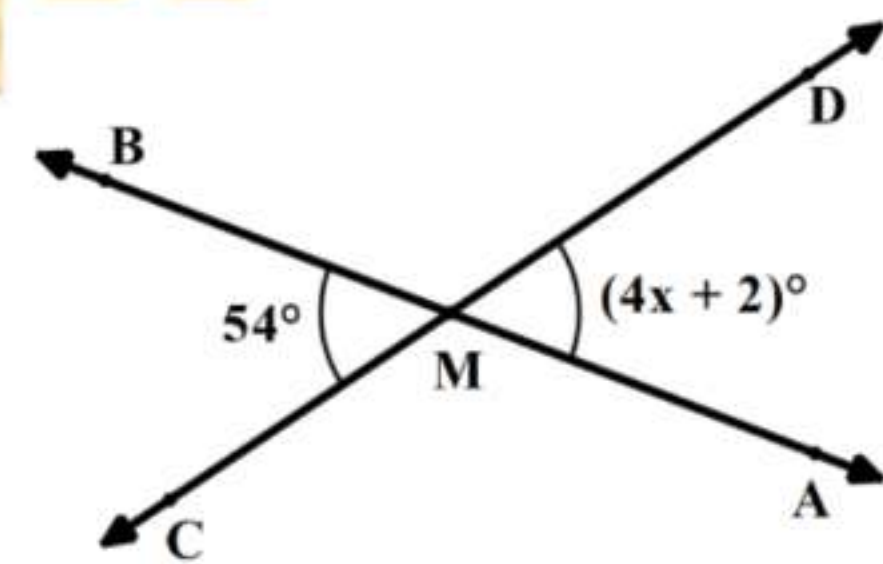


- (A) 60° (B) 180° (C) 20° (D) 30°

30) In the opposite figure:

$$\text{If } \overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$$

What is the value of x ?

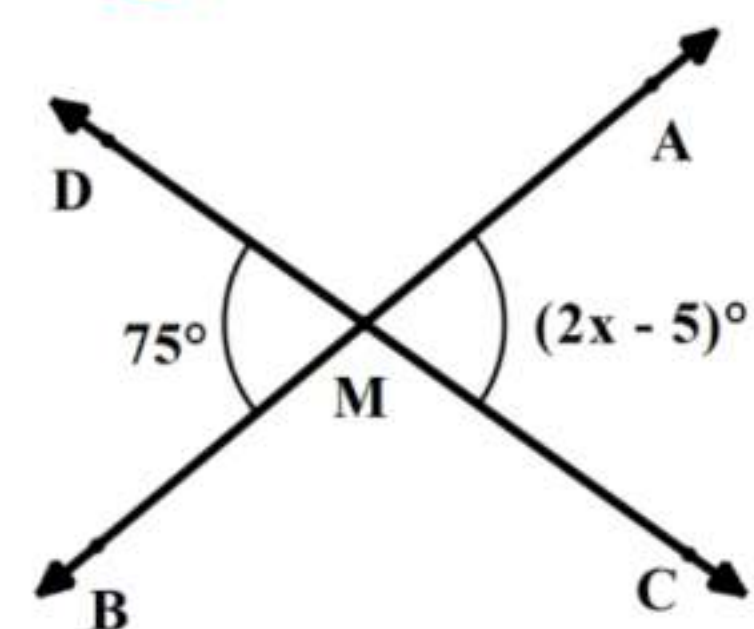


- (A) 12° (B) 13° (C) 14° (D) 15°

31) In the opposite figure:

$$\text{If } \overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$$

What is the value of x ?



- (A) 70° (B) 40° (C) 75° (D) 60°

32) If two vertically opposite angles have measure $(3x)^\circ$ and $(x + 56)^\circ$, then the measure of each one of them is

- (A) 28° (B) 56° (C) 80° (D) 84°

33) The sum of measure of accumulative angles around one point = $^\circ$.

- (A) 45° (B) 90° (C) 180° (D) 360°

34) The sum of the measures of the accumulative angles at a point equal

- (A) Two right angles (B) Three right angles
(C) Four right angles (D) Five right angles

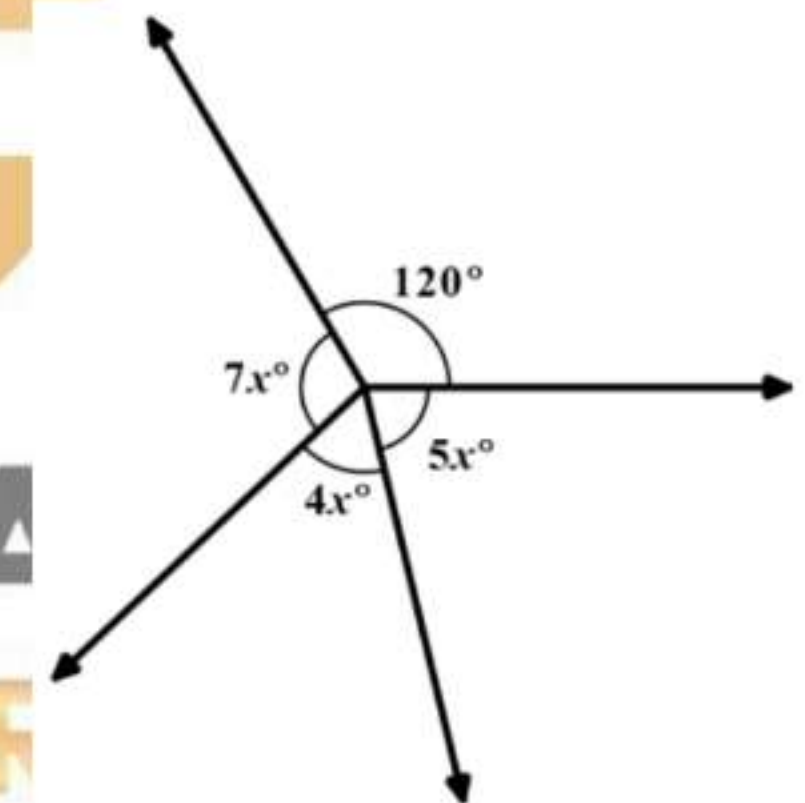
35) The sum of the measures of 4 angles around a point is The sum of the measure of 5 angles around a point.

- (A) = (B) < (C) > (D) $\neq$

36) In the opposite figure:

What is the value of x ?

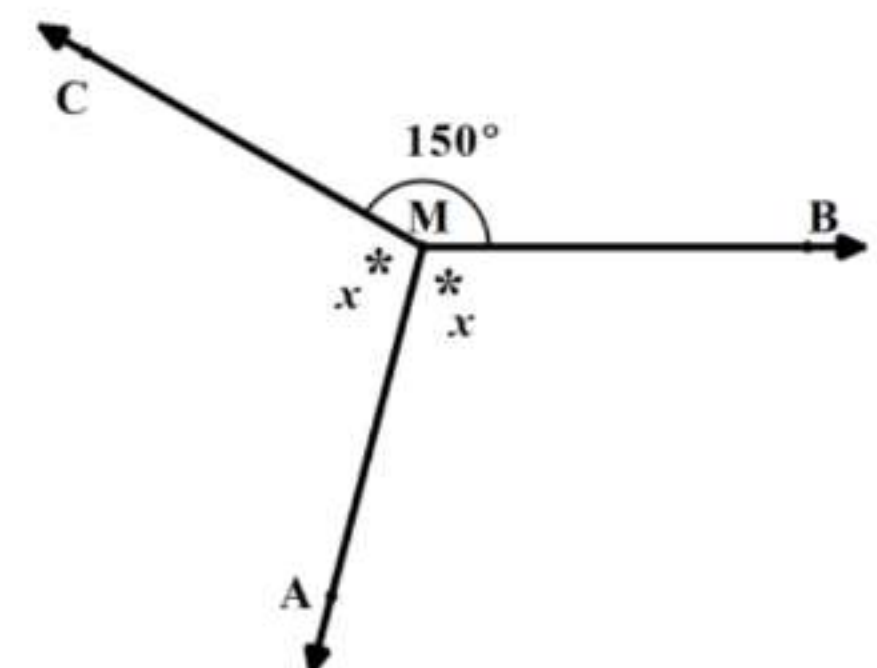
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- (A) 5° (B) 15° (C) 60° (D) 240°

37) In the opposite figure:

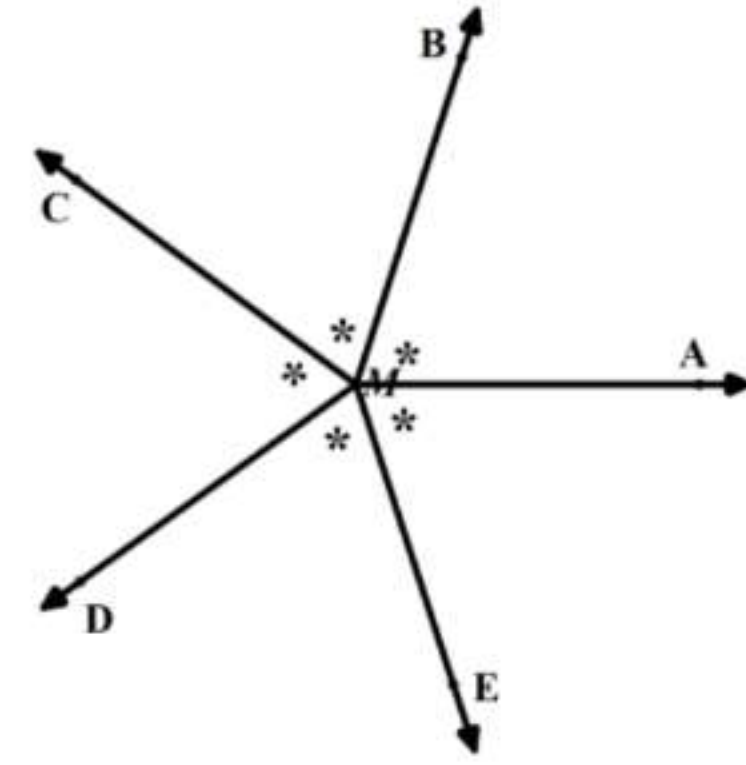
What is the value of x ?



- (A) 210° (B) 180° (C) 135° (D) 105°

38) In the opposite figure:

What is the measure of $\angle AMC$?



- (A) 60° (B) 72° (C) 144°

39) If the ratio among the measure of 3 angles around a point is $4 : 3 : 2$, then the measure of the greatest angle is

- (A) 40° (B) 80° (C) 120° (D) 160°

40) If L_1, L_2 , and L_3 are three lines in the same plane, $L_3 // L_1$ and $L_3 // L_2$, then:

- (A) $L_3 \perp L_2$ (B) $L_3 \perp L_1$
(C) $L_2 // L_1$ (D) $L_2 \perp L_1$

41) If L_1, L_2 , and L_3 are three lines in the same plane, $L_3 // L_1$ and $L_2 \perp L_1$, then:

- (A) $L_3 \perp L_1$ (B) $L_3 // L_2$
(C) $L_1 // L_2$ (D) L_2 coincides with L_3

42) If L_1, L_2 , and L_3 are three lines in the same plane, $L_2 \perp L_1$ and $L_3 // L_1$, then: $L_2 \dots L_3$

- (A) $\perp$ (B) $//$ (C) coincide (D) bisects

43) If a straight line intersects two parallel lines, then any two alternating angles are

44) If a straight line intersects two straight lines and produces two alternating angles that are equal in measure, then the two straight lines are

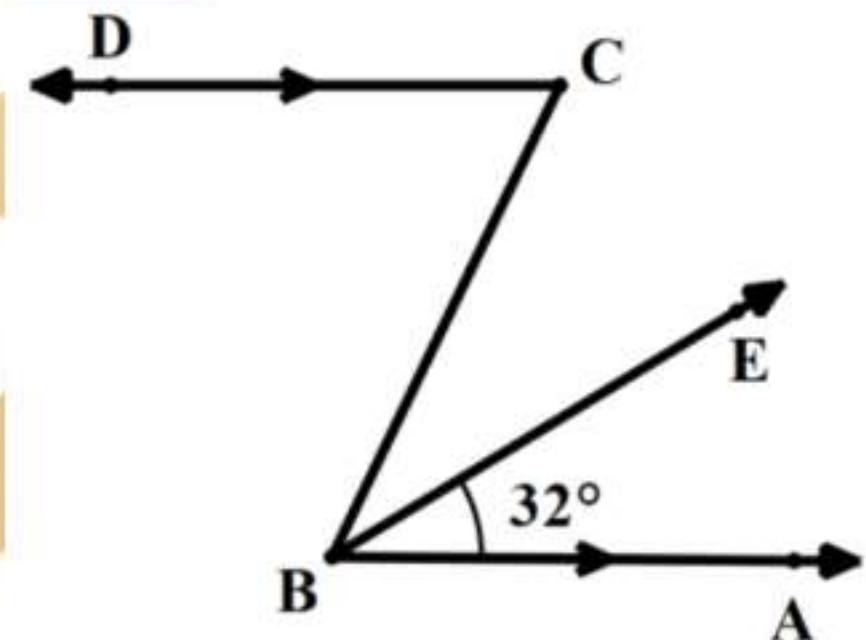
45) If a straight line intersects two parallel straight lines, then any two corresponding angles are

- 46) If a straight line intersects two straight lines and produces two corresponding angles that are equal in measure, then the straight lines are
- 47) If a straight line intersects two parallel straight lines, then any two interior angles on the same side of the transversal are
- 48) If a straight line intersects two straight lines and the interior angles on the same side of the transversal are supplementary, then the two straight lines are
- 49) The two lines parallel to a third line are

- (A) perpendicular (B) coincident
(C) parallel (D) intersecting

50) In the opposite figure:

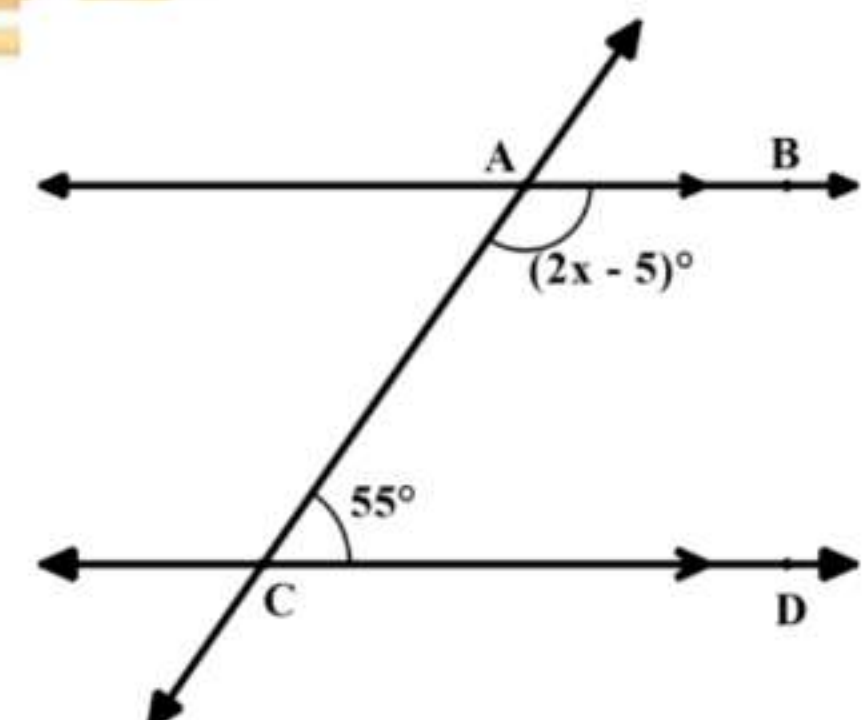
$\overrightarrow{BE}$ bisects $\angle ABC$, $\overrightarrow{CD} \parallel \overrightarrow{BA}$, then $m(\angle C) = \dots$



- (A) 32° (B) 64° (C) 60° (D) 80°

51) In the opposite figure:

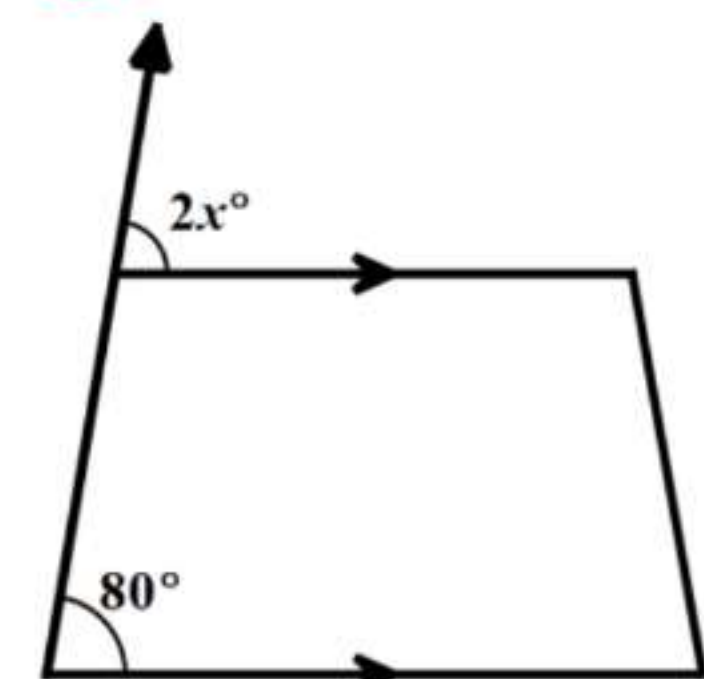
What is the value of x ?



- (A) 125° (B) 130° (C) 135° (D) 65°

52) In the opposite figure:

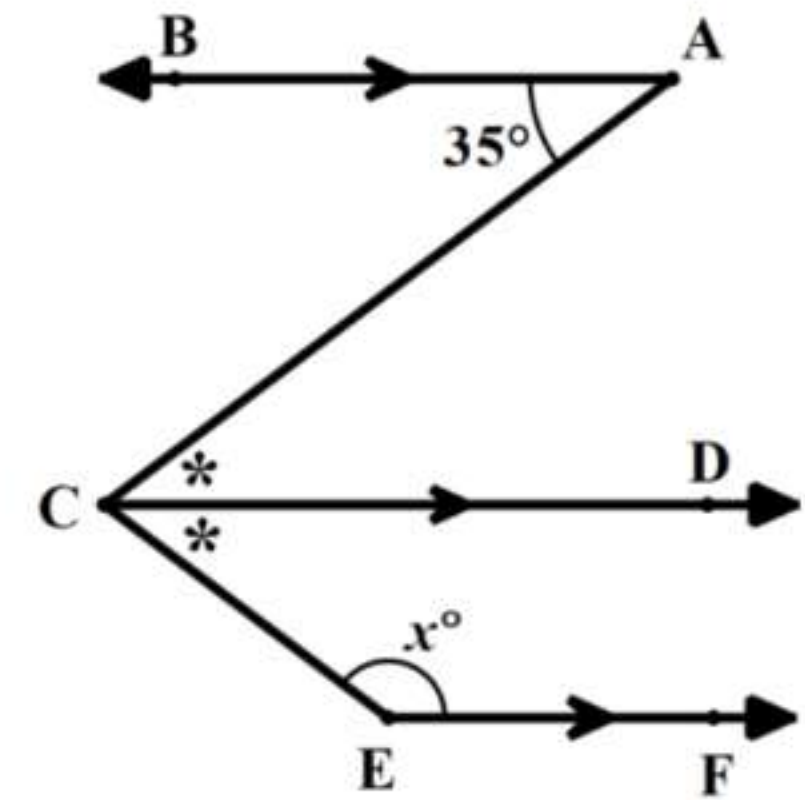
What is the value of x ?



- (A) 40° (B) 60° (C) 80° (D) 100°

53) In the opposite figure:

What is the value of x ?



(A) 35°

(B) 85°

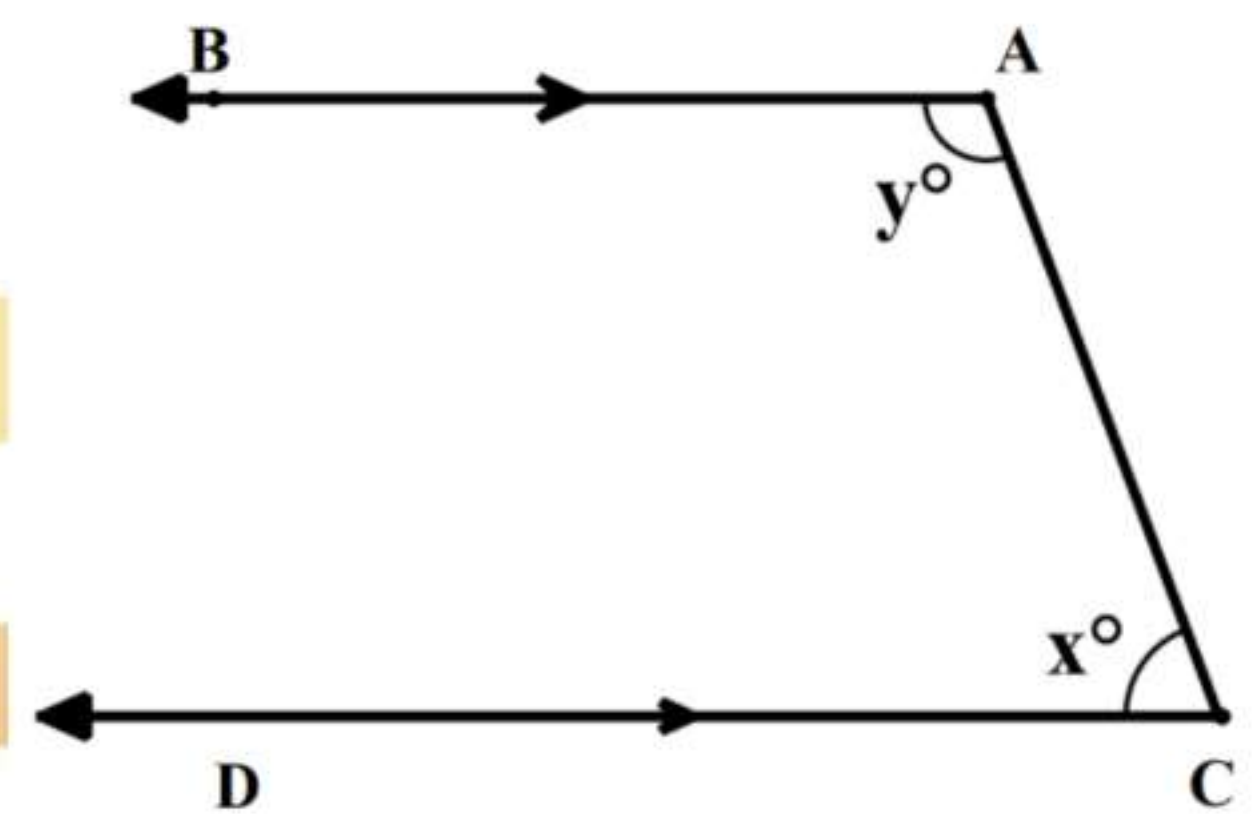
(C) 135°

(D) 145°

54) In the opposite figure:

$$\overrightarrow{AB} \parallel \overrightarrow{CD}$$

$$\frac{x}{y} = \frac{7}{11} \text{ What is the value of } x ?$$



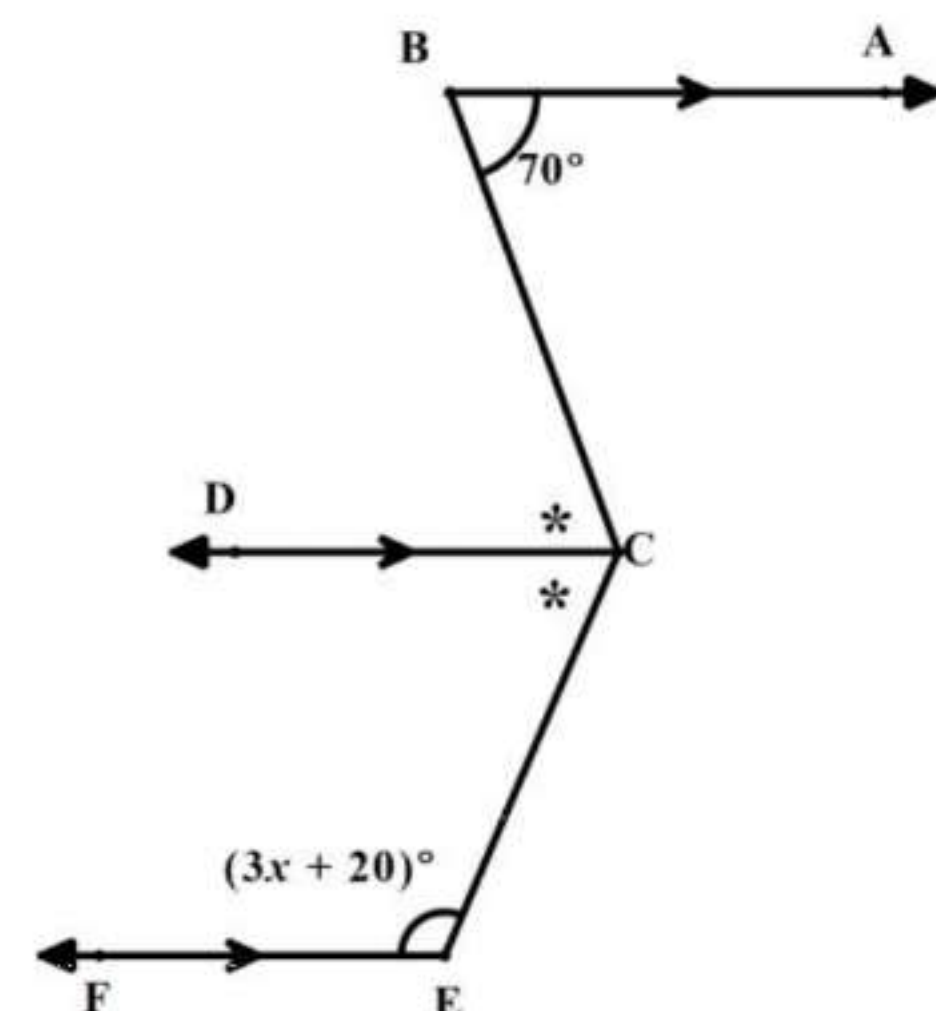
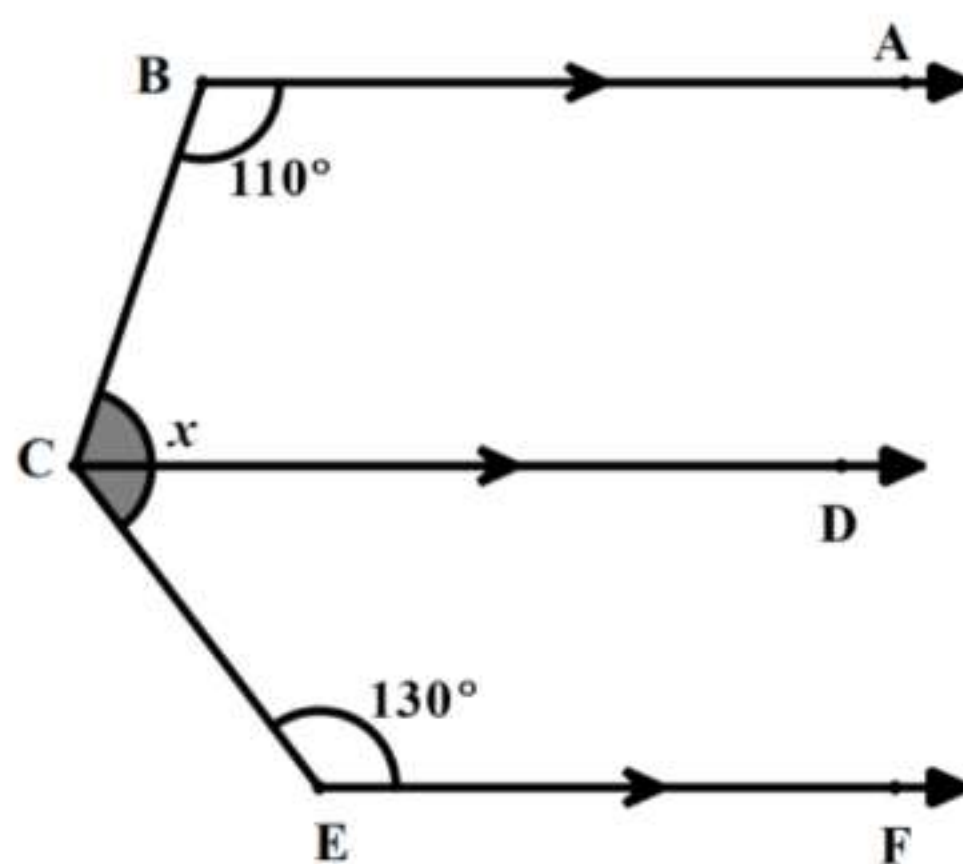
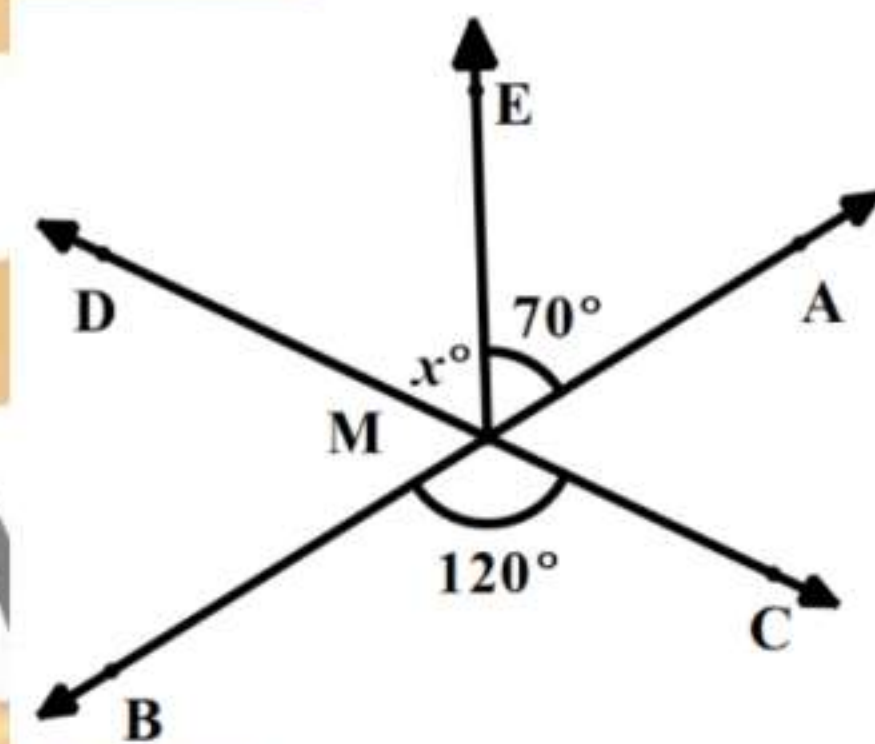
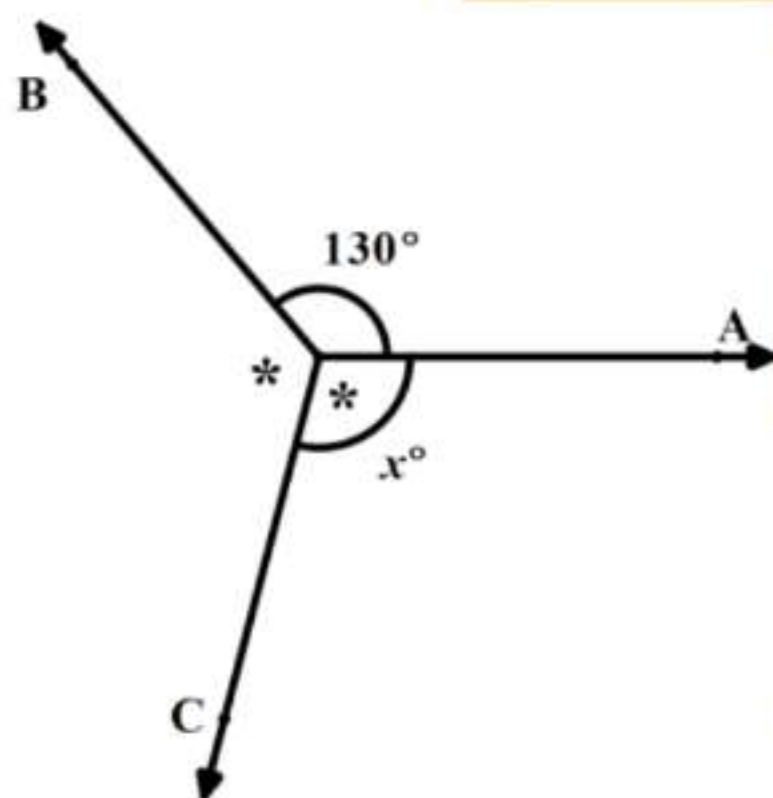
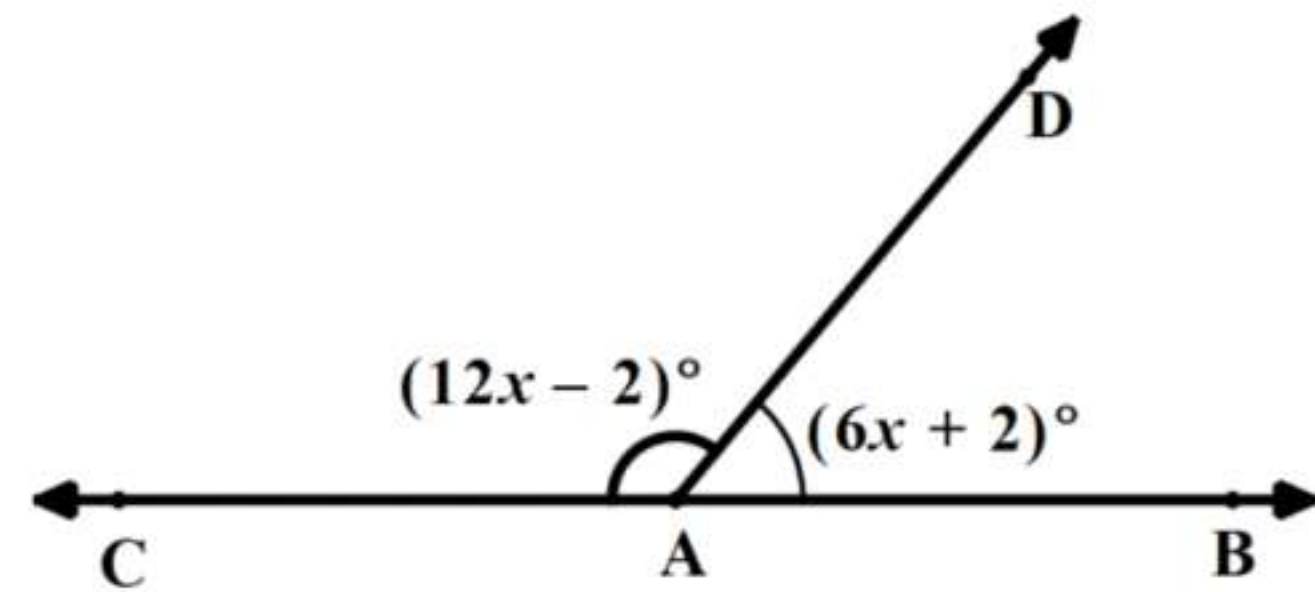
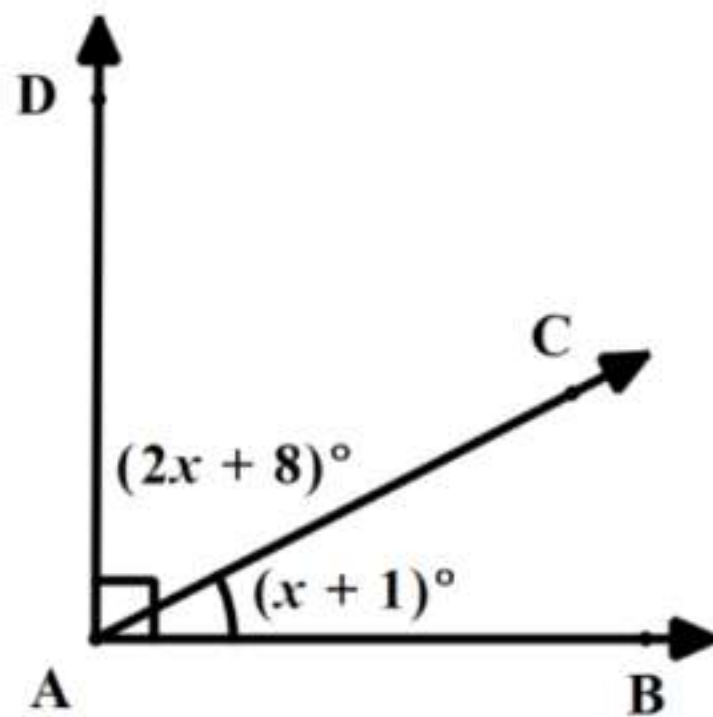
(A) 60°

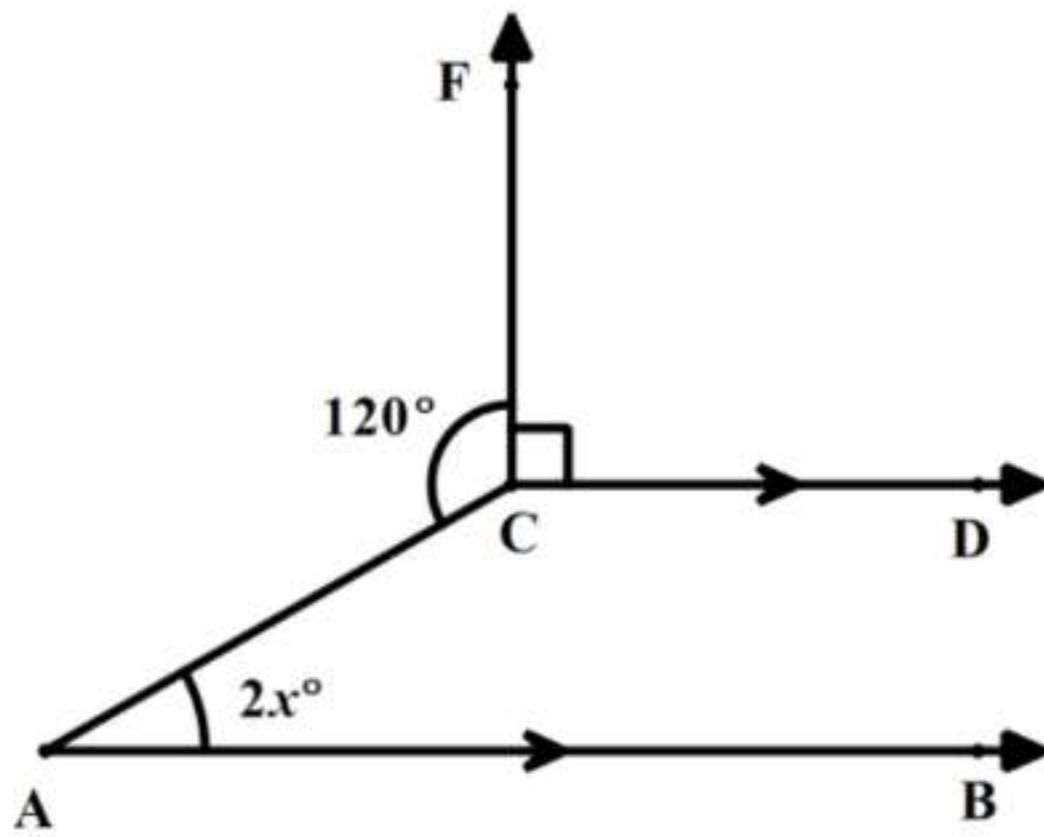
(B) 70°

(C) 100°

(D) 110°

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2**Answer the following questions****1) Find the value of x**



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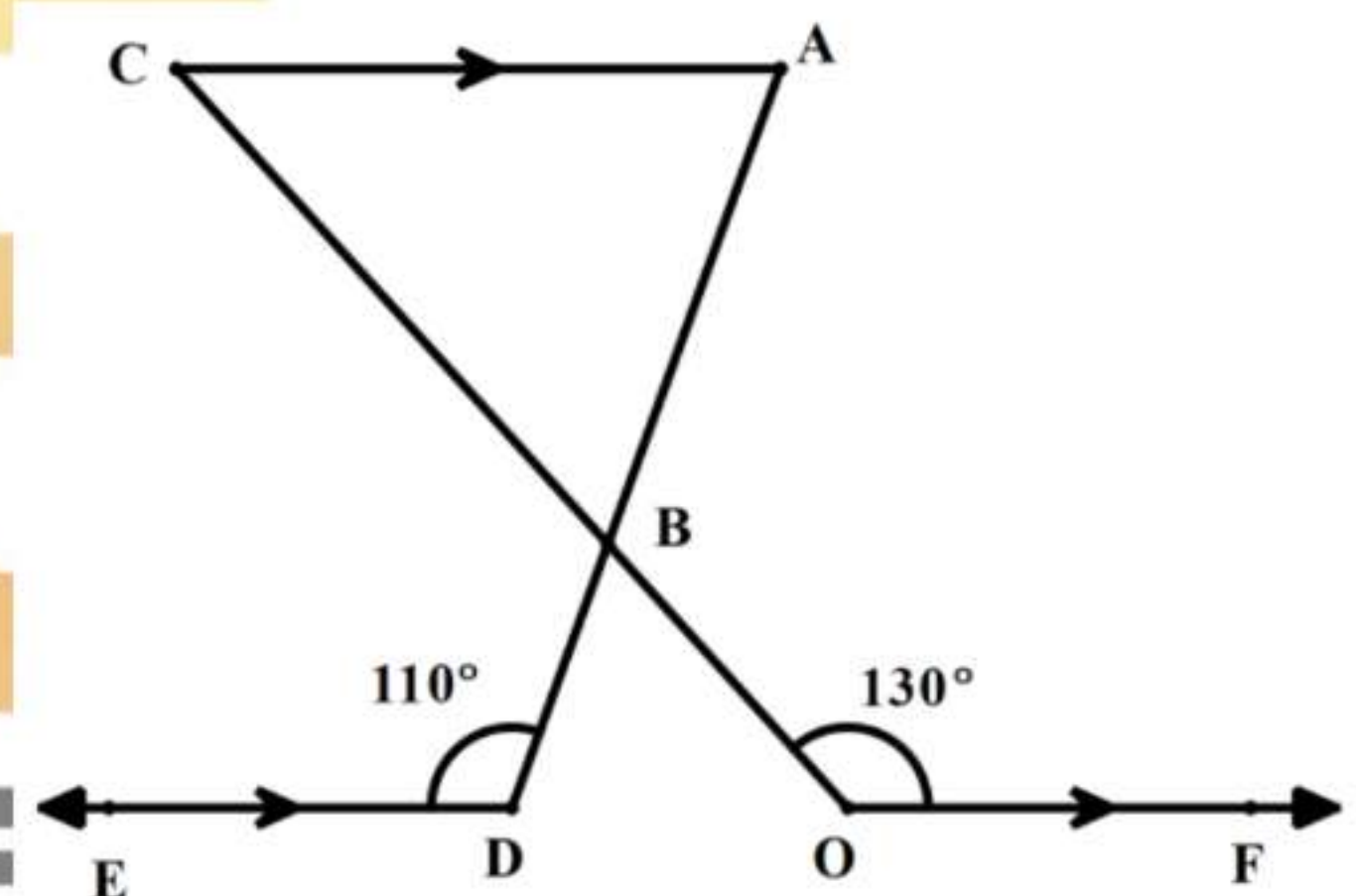
2) In the opposite figure:

$$\overline{AC} \parallel \overline{DE} \parallel \overline{OF}$$

$$m(\angle ADE) = 110^\circ, m(\angle COF) = 130^\circ$$

Find : $m(\angle OBD)$

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Math prep 1

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Algebra

Unit 2

Lessons 1,2,3

1 Choose the correct answer.

(1) $a + a + a = \dots\dots\dots$

☐ (A) $3a^3$

☐ (B) a^3

☐ (C) $3 + a$

☒ (D) $3a$

(2) $y + y + y + y = \dots\dots\dots$

☐ (A) y^4

☒ (B) $4y$

☐ (C) $4 + y$

☐ (D) $4y^4$

(3) $5x + (-3x) = \dots\dots\dots$

☐ (A) $8x$

☒ (B) $2x$

☐ (C) $-2x$

☐ (D) $-8x$

(4) Which of the following pairs of terms are like terms?

☐ (A) $2x, -2x^2$

☒ (B) $3a, 8a$

☐ (C) $7x, 7$

☐ (D) x^2, y^2

(5) What is the mathematical formula representing the area (A) of a parallelogram with a base length (ℓ) and its corresponding height (h)?

☐ (A) $A = \frac{1}{2}\ell h$

☒ (B) $A = \ell h$

☐ (C) $A = \ell + h$

☐ (D) $A = \frac{\ell}{h}$

(6) What is the suitable equation to find the side length of an equilateral triangle whose perimeter is 12 cm?

☐ (A) $x + 3 = 12$

☒ (B) $3x = 12$

☐ (C) $2x = 12$

☐ (D) $x = 12$

(7) The algebraic term $-5x$ exceeds the algebraic term $-11x$ by

☐ (A) $-16x$

☒ (B) $6x$

☐ (C) $-6x$

☐ (D) $16x$

(8) The number of terms in the algebraic expression: $6n - 5n^2 - 9$ is

☐ (A) 5

☒ (B) 3

☐ (C) 2

☐ (D) 4

(9) Which of the following are like terms?

☐ (A) $2y, -2y^2$

☐ (B) y^2, x^2

☒ (C) $2y, -3y$

☐ (D) $5, -3y$

(10) The constant term in the algebraic expression: $3x - 7y - 5xy - 7$ is

☐ (A) $3x$

☐ (B) $-7y$

☐ (C) $-5xy$

☒ (D) -7

(11) Which of the following are like terms?

☒ (A) $3x, 7x$

☐ (B) $5xy, 7yx^2$

☐ (C) $5x, 5$

☐ (D) $13a^2, 7a$

(12) The result of adding the two expressions: $2x - 1$ and $-3x + 5$ is

☐ (A) $-5x + 4$

☐ (B) $x - 4$

☒ (C) $4 - x$

☐ (D) $x + 4$

(13) The expression: $2x + 3y$ exceeds $3y - 2x$ by

☐ (A) $-6y$

☒ (B) $4x$

☐ (C) $-4x$

☐ (D) $6y$

(14) The result of adding the two expressions: $-2y - x - 3z$ and $x + 2y - 3z$ is ...

☒ (A) $-6z$

☐ (B) zero

☐ (C) $6z$

☐ (D) $2x - 4y + 6z$

(15) The additive inverse of the expression: $3x - 2y + 8$ is

☐ (A) $-3x - 2y + 8$

☐ (B) $-3x + 2y + 8$

☒ (C) $-3x + 2y - 8$

☐ (D) $3x + 2y - 8$

(16) + $(2x - 3y) = -x + y - 4$

☐ (A) $x - 2y - 4$

☐ (B) $-3x + 4y + 4$

☒ (C) $-4 - 3x + 4y$

☐ (D) $4y + 3x + 4$

(17) $(4x - 3y + 2) - (\dots\dots\dots) = y + x - 5$

☐ (A) $3x - 4y + 3$

☒ (B) $3x - 4y + 7$

☐ (C) $3y + 4x + 7$

☐ (D) $-2y + 5x - 3$

(18) $(\dots\dots\dots) - (a - 3b + c) = -4c - 2b$

☐ (A) $a - b + 5c$

☐ (B) $-5c + b - a$

☐ (C) $a - b + 5c$

☒ (D) $-3c - 5b + a$

(19) $(17 - 3x + 5y) + (\dots\dots\dots) = 15 - y$

☐ (A) $3x - 2 - 4y$

☐ (B) $-2 - 6y$

☒ (C) $3x - 6y - 2$

☐ (D) $6y + 3x - 2$

(20) If the age of Khadija now is y years old, then her age 10 years ago is.....

☐ (A) $y + 10$

☒ (B) $y - 10$

☐ (C) $10 - y$

☐ (D) $10 + y$

(21) The result of subtracting: $7y - 6$ from $3y + 7$ is.....

☐ (A) $10y + 1$

☐ (B) $-4y - 1$

☐ (C) $4y + 1$

☒ (D) $-4y + 13$

(22) The result of adding the expressions: $2x - 4y + 6$ and $-3x + 4y - 6$ is.....

☐ (A) $5x + 8y + 12$

☒ (B) $-x$

☐ (C) $-x + 8y$

☐ (D) $-x - 12$

(23) The result of adding the two expressions: $5b - 3a$ and $5a - 3b$ is

(A) $10a - 6b$

(B) $2a + 2b$

(C) $8a + 8b$

(D) $-8a + 2b$

(24) $x + 3 = 10$ is a equation.

(A) Linear

(B) Quadratic

(C) Cubic

(D) other

(25) $x^2 + 3 = 10$ is a equation.

(A) Linear

(B) Quadratic

(C) Cubic

(D) other

(26) $x^3 + 3 = 10$ is a equation.

(A) Linear

(B) Quadratic

(C) Cubic

(D) other

(27) $x^3 + 3y - z^2 = 10$ is a equation.

(A) Linear

(B) Quadratic

(C) Cubic

(D) other

(28) If $2X = 2$, then $(3X - 1) =$

(A) 1

(B) 2

(C) 3

(D) 4

(29) If $3(x - 2) = 12$, then $5x =$

(A) 5

(B) 10

(C) 20

(D) 30

(30) If $2x = 6$, then $4x + 1 =$

(A) 5

(B) 13

(C) 25

(D) 30

(31) If $4(x + 2) = 12$, and the substitution set is $\{2, 3, 4\}$,
then the solution set =

(A) $\{1\}$

(B) $\{2\}$

(C) $\{3\}$

(D) $\emptyset$

(32) The solution set of the equation: $3X - 1 = 4$ in $\mathbb{N}$ is

(A) $\{3\}$

(B) $\{4\}$

(C) $\{\frac{5}{3}\}$

(D) $\emptyset$

(33) The solution set of the equation: $3X - 1 = 4$ in $\mathbb{Z}$ is

(A) $\{3\}$

(B) $\{4\}$

(C) $\{\frac{5}{3}\}$

(D) $\emptyset$

(34) The solution set of the equation: $3X - 1 = 4$ in $\mathbb{Q}$ is

(A) $\{3\}$

(B) $\{4\}$

(C) $\{\frac{5}{3}\}$

(D) $\emptyset$

(35) What the solution set of the equation $3(x - 2) = x$ in $\mathbb{Z}$?

(A) $\{2\}$

(B) $\{3\}$

(C) $\{4\}$

(D) $\{5\}$

(36) Which of the following equations does not have a solution in $\mathbb{Z}$?

(A) $6X = 12$

(B) $6X = 15$

(C) $6X = 18$

(D) $6X = 24$

(37) Which of the following represents a solution to the equation:

$2(x - 5) = 0$ in $\mathbb{Q}$?

(A) 0

(B) 5

(C) -5

(D) 10

(38) The length of the base of a parallelogram is 15 cm and its corresponding height is $(2x + 3)$ cm , if its area is 135 square centimeters , then $x = \dots\dots\dots$

(A) 2

(B) 3

(C) 4

(D) 5

(39) Two consecutive odd numbers add up to 28. Which of the following equations expresses this ?

(A) $x + x + 1 = 28$

(B) $2x + 1 = 28$

(C) $2x - 1 = 28$

(D) $2x + 2 = 28$

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2

Answer the following questions

1- Add: $2x + 3y - 5$ and $x - y + 8$

$$\begin{array}{r} 2x + 3y - 5 \\ + \quad x - y + 8 \\ \hline 3x + 2y + 3 \end{array}$$

2- Find the sum of the following: $2x - y + 4$ and $5x + 4y - 6$

$$\begin{array}{r} 2x - y + 4 \\ + \quad 5x + 4y - 6 \\ \hline 7x + 3y - 2 \end{array}$$

3- Find the result of subtracting: $-4x + 3y + 8$ from $5x + 8y - 3$

$$\begin{array}{r} 5x + 8y - 3 \\ - (-4x + 3y + 8) \\ \hline 9x + 5y - 11 \end{array}$$

4- If $2x + 3 = 1$, then what is the value of $x - 7$?

$$\begin{array}{r} 2x + 3 = 1 \\ 2x = 1 - 3 \\ 2x = -2 \\ \hline x = -1 \end{array}$$

$$\begin{array}{r} x - 7 = \\ -1 - 7 = -8 \end{array}$$

5- If $5k = 20$, what is the value of: $3k + 1$?

$$\begin{array}{r} 5k = 20 \\ \hline k = 4 \end{array}$$

$$3 \times 4 + 1 = 13$$

6- Add the two algebraic expressions: $3x + 2y$ and $5y - 6x + 2$, then find the numerical value of the result when $x = 3$, $y = -1$

$$\begin{array}{r} 3x + 2y \\ + \quad -6x + 5y + 2 \\ \hline -3x + 7y + 2 \end{array}$$

$$\begin{array}{r} \text{at } x = 3 \\ y = -1 \end{array}$$

$$-3 \times 3 + 7 \times -1 + 2 = -14$$

- 7- Simplify the expression: $3(a - 2b) - 2(a + b)$, then find the value of the expression if $a = 5$ and $b = -1$

$$\begin{aligned} & \underline{3a - 6b - 2a - 2b} \\ & = \underline{a - 8b} = 5 - 8(-1) = 13 \end{aligned}$$

- 8- What is the increase of: $3x - 6y + 4$ than $3x + y - 3$?

$$\begin{array}{r} 3x - 6y + 4 \\ + \quad 3x + y - 3 \\ \hline 6x - 5y + 7 \end{array}$$

- 9- What is the decrease of: $x + 2y - 3z$ than $3y - 3z + 10x$?

$$\begin{array}{r} 10x + 3y - 3z \\ + \quad x + 2y - 3z \\ \hline 11x + 5y - 6z \end{array}$$

- 10- Find the solution set of the equation: $-2(x + 1) = 3$ in $\mathbb{N}$

$$\begin{aligned} -2x - 2 &= 3 \\ -2x &= 3 + 2 \\ -2x &= 5 \\ \frac{-2x}{-2} &= \frac{5}{-2} \end{aligned} \quad \left\{ \begin{array}{l} x = -\frac{5}{2} \\ \text{the s.s.} = \emptyset \end{array} \right.$$

- 11- Find the solution set of the equation: $3(x - 2) = 5x - 10$ in $\mathbb{N}$

$$\begin{aligned} 3x - 6 &= 5x - 10 \\ 3x - 5x &= -10 + 6 \\ -2x &= -4 \\ \frac{-2x}{-2} &= \frac{-4}{-2} \end{aligned} \quad \left\{ \begin{array}{l} x = 2 \\ \text{the s.s.} = \{2\} \end{array} \right.$$

- 12- Find the solution set of the equation: $5x + 2 = 12$ in $\mathbb{Z}$

$$\begin{aligned} 5x &= 12 - 2 \\ 5x &= 10 \\ \frac{5x}{5} &= \frac{10}{5} \end{aligned} \quad \left\{ \begin{array}{l} x = 2 \\ \text{the s.s.} = \{2\} \end{array} \right.$$

- 13- Find the solution set of the equation: $5x + 1 = -9$ in $\mathbb{Z}$

$$\begin{aligned} 5x &= -9 - 1 \\ 5x &= -10 \\ \frac{5x}{5} &= \frac{-10}{5} \end{aligned} \quad \left\{ \begin{array}{l} x = -2 \\ \text{the s.s.} = \{-2\} \end{array} \right.$$

14- Find the solution set of the equation: $3(x - 2) = 18$ in $\mathbb{Z}$

$$\begin{aligned} 3x - 6 &= 18 & \left\{ \begin{array}{l} x = 8 \\ \text{the s.s.} = \{8\} \end{array} \right. \\ 3x &= 18 + 6 \\ \frac{3x}{3} &= \frac{24}{3} \end{aligned}$$

15- Find the solution set of the equation: $2x + 5 = 7$ in $\mathbb{Q}$

$$\begin{aligned} 2x &= 7 - 5 \\ \frac{2x}{2} &= \frac{2}{2} & \left\{ \begin{array}{l} x = 1 \\ \text{the s.s.} = \{1\} \end{array} \right. \end{aligned}$$

16- Find the solution set of the equation: $3x + 2 = -7$ in $\mathbb{Q}$

$$\begin{aligned} 3x &= -7 - 2 & \left\{ \begin{array}{l} x = -3 \\ \text{the s.s.} = \{-3\} \end{array} \right. \\ \frac{3x}{3} &= \frac{-9}{3} \end{aligned}$$

17- Find the solution set of the equation: $5x + 14 = 4 + 3x$ in $\mathbb{Q}$

$$\begin{aligned} 5x - 3x &= 4 - 14 & \left\{ \begin{array}{l} x = -5 \\ \text{the s.s.} = \{-5\} \end{array} \right. \\ \frac{2x}{2} &= \frac{-10}{2} \end{aligned}$$

18- Find two consecutive odd numbers their sum is 92?

Let the two numbers $x, x+2$

$$\begin{aligned} x + x + 2 &= 92 & \left\{ \begin{array}{l} 2x = 92 - 2 \\ 2x = 90 \\ \frac{2x}{2} = \frac{90}{2} \end{array} \right. & \left\{ \begin{array}{l} x = 45 \\ \text{the s.s.} = \{45, 47\} \end{array} \right. \end{aligned}$$

19- Find three consecutive even numbers their sum is 84?

$x, x+2, x+4$

$$\begin{aligned} x + x + 2 + x + 4 &= 84 & \left\{ \begin{array}{l} 3x = 84 - 6 \\ 3x = 78 \\ \frac{3x}{3} = \frac{78}{3} \end{array} \right. & \left\{ \begin{array}{l} x = 26 \\ \text{the s.s.} = \{26, 28, 30\} \end{array} \right. \end{aligned}$$

20- Find three consecutive numbers their sum is 123?

$x, x+1, x+2$

$$\begin{aligned} x + x + 1 + x + 2 &= 123 & \left\{ \begin{array}{l} 3x = 123 - 3 \\ 3x = 120 \\ \frac{3x}{3} = \frac{120}{3} \end{array} \right. & \left\{ \begin{array}{l} x = 40 \\ \text{the s.s.} = \{40, 41, 42\} \end{array} \right. \end{aligned}$$

Math prep 1

2026



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Geometry

Unit 4

Lessons 1,2

1 Choose the correct answer.

- 1) The sum of two complementary angles =°.
☐ (A) 30 ☒ (B) 90 ☐ (C) 180 ☐ (D) 360
- 2) The sum of two supplementary angles =°.
☐ (A) 30 ☐ (B) 90 ☒ (C) 180 ☐ (D) 360
- 3) What is the measure of the angle that complements an angle of measure 68°?
☒ (A) 22° ☐ (B) 125° ☐ (C) 110° ☐ (D) 305°
- 4) If $m(\angle x) = m(\angle y)$ and $\angle x$ complements $\angle y$, what is the measure of $\angle y$?
☒ (A) 45° ☐ (B) 90° ☐ (C) 180° ☐ (D) 360°
- 5) What is the measure of the angle that supplements an angle of measure 23°?
☐ (A) 23° ☐ (B) 67° ☒ (C) 157° ☐ (D) 337°
- 6) If $m(\angle x) = m(\angle y)$ and $\angle x$ supplements $\angle y$, what is the measure of $\angle y$?
☐ (A) 45° ☒ (B) 90° ☐ (C) 180° ☐ (D) 360°
- 7) If $\angle x$ and $\angle y$ are supplementary angle, and $m(\angle x) = 3m(\angle y)$ what is the measure of $\angle x$?
☐ (A) 45° ☐ (B) 90° ☒ (C) 135° ☐ (D) 180°
- 8) What is the type of the angle complement an zero angle?
☐ (A) Zero ☐ (B) Acute ☒ (C) Right ☐ (D) Obtuse
- 9) What is the type of the angle complement an acute angle?
☐ (A) Zero ☒ (B) Acute ☐ (C) Right ☐ (D) Obtuse
- 10) What is the type of the angle complement an Right angle?
☒ (A) Zero ☐ (B) Acute ☐ (C) Right ☐ (D) Obtuse
- 11) What is the type of the angle supplements an zero angle?
☐ (A) Zero ☐ (B) Acute ☐ (C) Obtuse ☒ (D) Straight
- 12) What is the type of the angle supplements an acute angle?
☐ (A) Zero ☐ (B) Acute ☒ (C) Obtuse ☐ (D) Straight

13) What is the type of the angle supplements an obtuse angle?
(A) Zero (B) Acute (C) Obtuse (D) Straight

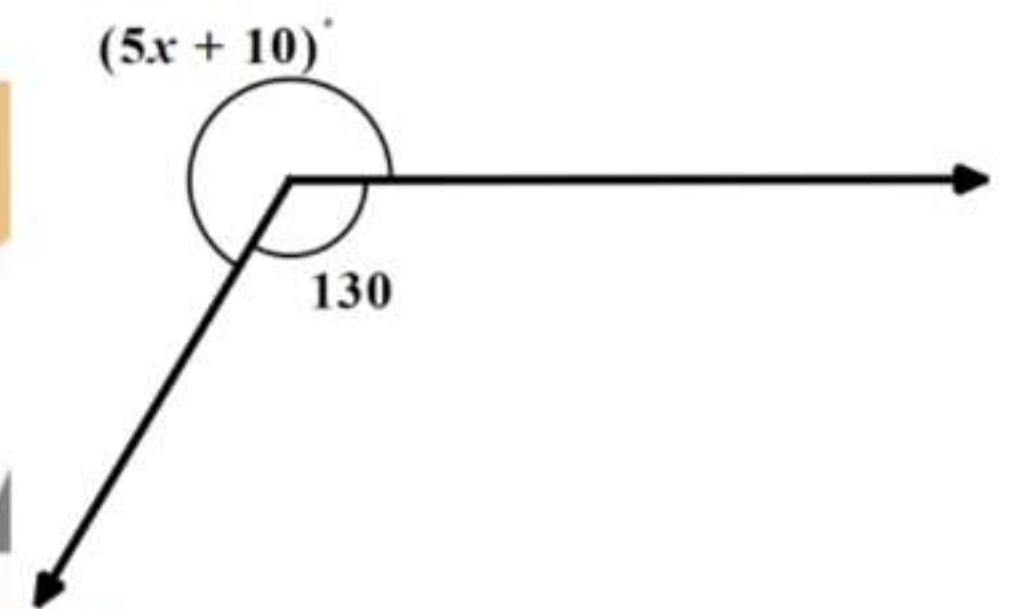
14) What is the type of the angle supplements an Straight angle?
(A) Zero (B) Acute (C) Obtuse (D) Straight

15) $m(\angle A) + m(\text{reflex } \angle A)$ equals the measure of
(A) 45° (B) 90° (C) 180° (D) 360°

16) $m(\angle A) + m(\text{reflex } \angle A)$ equals the measure of
(A) Two right angles (B) Three right angles
(C) Four right angles (D) Five right angles

17) if $m(\angle A) = 36^\circ 60'$, then the reflex of $m(\angle A) = \dots\dots\dots$
(A) 37° (B) 53° (C) 143° (D) 323°

18) In the opposite figure:
What is the value of x ?



(A) 230° (B) 220° (C) 44° (D) 22°

19) The two adjacent angles whose outer sides are perpendicular to each other are
.....

(A) Complementary (B) Supplementary
(C) perpendicular (D) parallel

20) The outer side of two adjacent complementary angles are

(A) perpendicular (B) parallel
(C) coinciding (D) Forming an acute angle

21) The two adjacent angles whose outer sides are lie on a straight line are

(A) Complementary

(B) Supplementary

(C) perpendicular

(D) parallel

22) The outer side of two adjacent supplementary angles are lies on

(A) straight line

(B) parallel

(C) coinciding

(D) Forming an acute angle

23) If $\overrightarrow{BA} \perp \overrightarrow{BC}$, then what is the measure of angle $\angle ABC$?

(A) 40°

(B) 90°

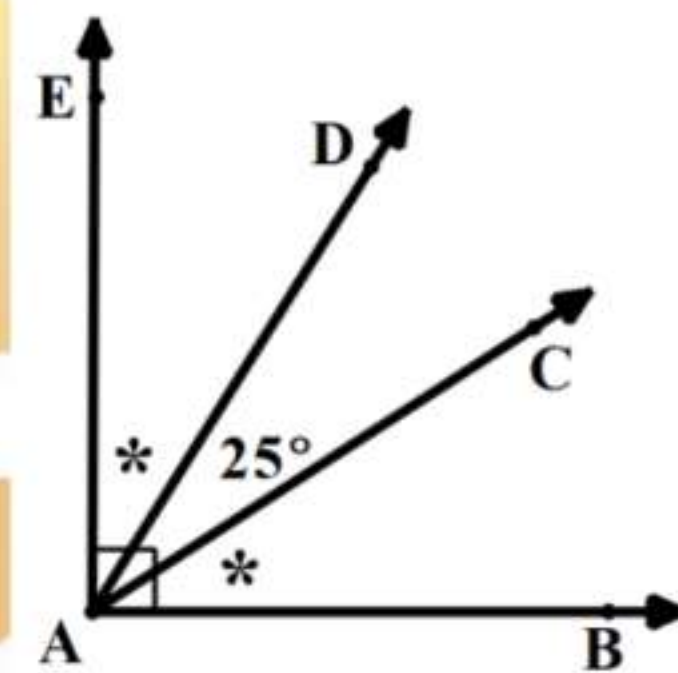
(C) 180°

(D) 360°

24) In the opposite figure:

If $\overrightarrow{AB} \perp \overrightarrow{AE}$

, then $m(\angle BAD) = \dots$



(A) 32.5°

(B) 57.5°

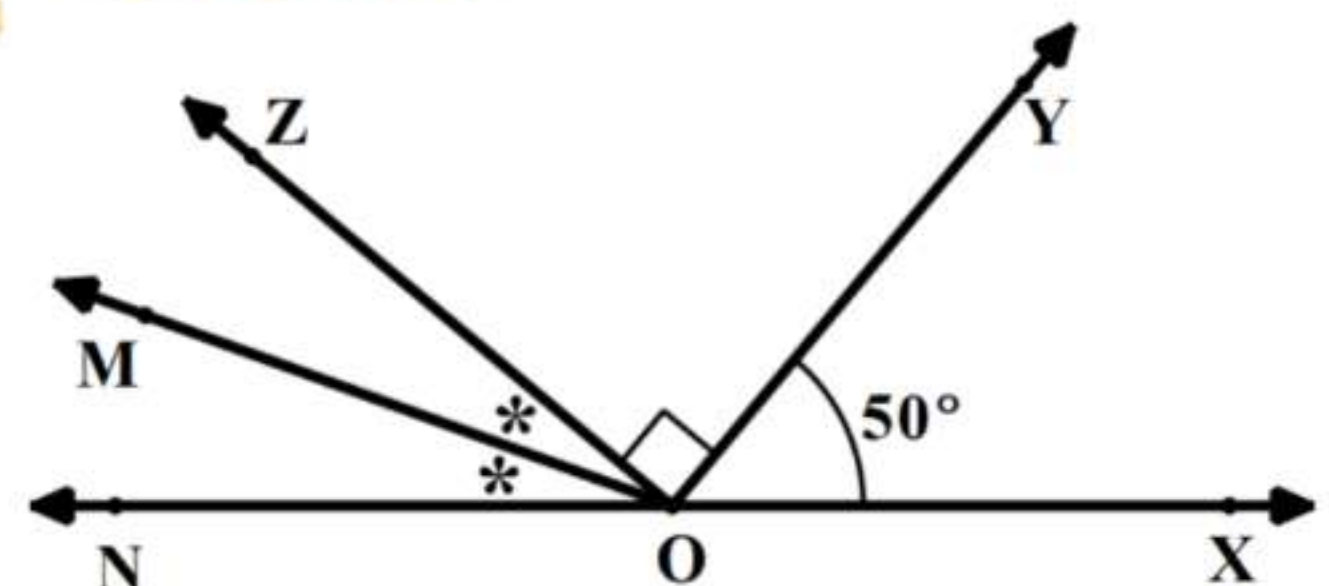
(C) 65°

(D) 67°

25) In the opposite figure:

If $O \in \overleftrightarrow{XN}$,

then $m(\angle MOX) = \dots$



(A) 20°

(B) 70°

(C) 140°

(D) 160°

26) Each Two vertically opposite angles are

(A) Complementary

(B) Supplementary

(C) Equal in measure

(D) parallel

27) The angle with a measure of 60° has a vertically opposite angle with a measure of

(A) 30°

(B) 60°

(C) 90°

(D) 180°

28) If the vertically opposite angles are complementary, then the measure of each is

(A) 45°

(B) 50°

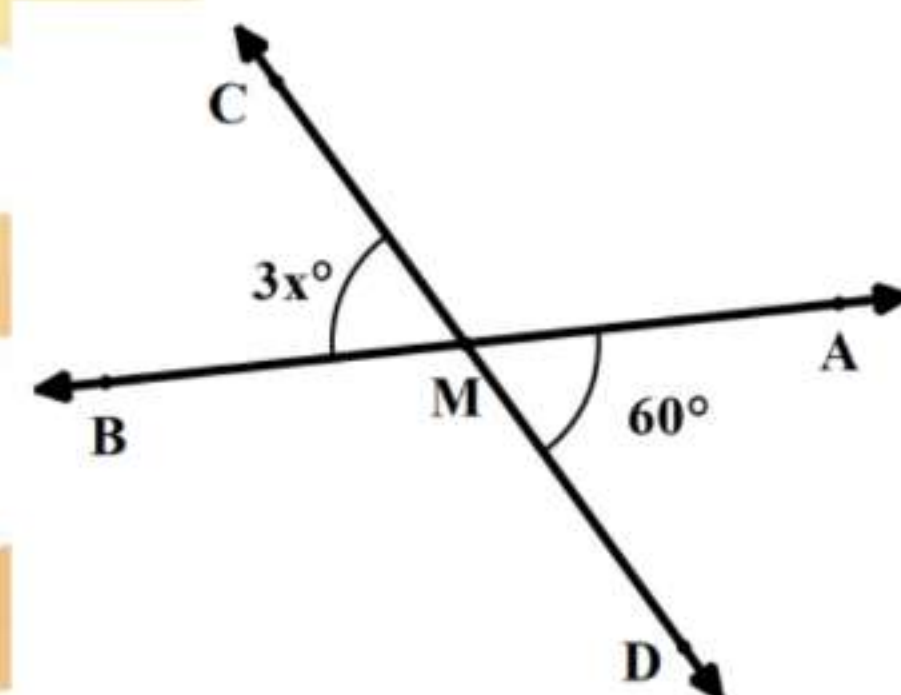
(C) 90°

(D) 180°

29) In the opposite figure:

If $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$

What is the value of x ?



(A) 60°

(B) 180°

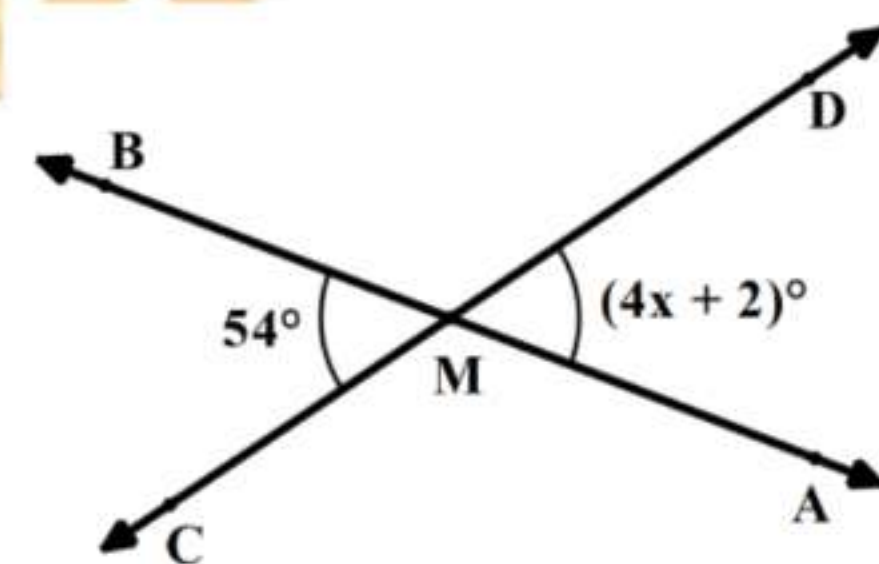
(C) 20°

(D) 30°

30) In the opposite figure:

If $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$

What is the value of x ?



(A) 12°

(B) 13°

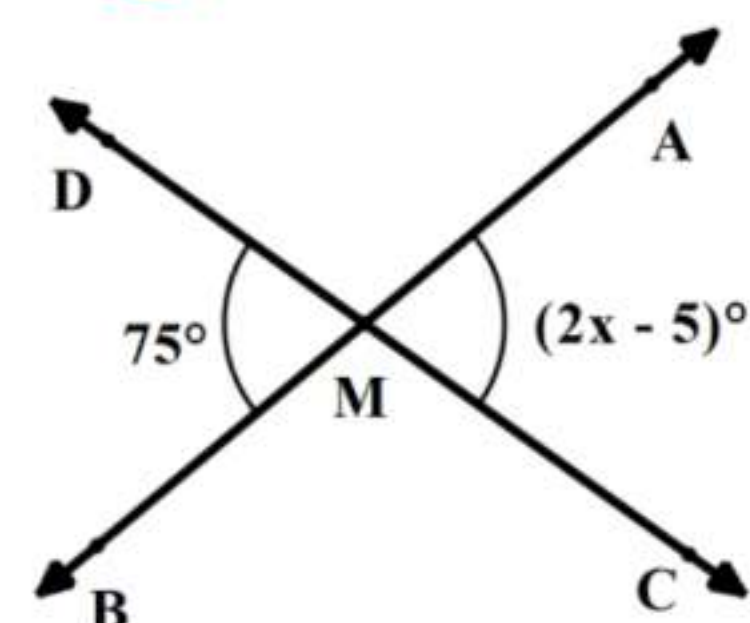
(C) 14°

(D) 15°

31) In the opposite figure:

If $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$

What is the value of x ?



(A) 70°

(B) 40°

(C) 75°

(D) 60°

32) If two vertically opposite angles have measure $(3x)^\circ$ and $(x + 56)^\circ$, then the measure of each one of them is

- (A) 28° (B) 56° (C) 80° (D) 84°

33) The sum of measure of accumulative angles around one point = $^\circ$.

- (A) 45° (B) 90° (C) 180° (D) 360°

34) The sum of the measures of the accumulative angles at a point equal

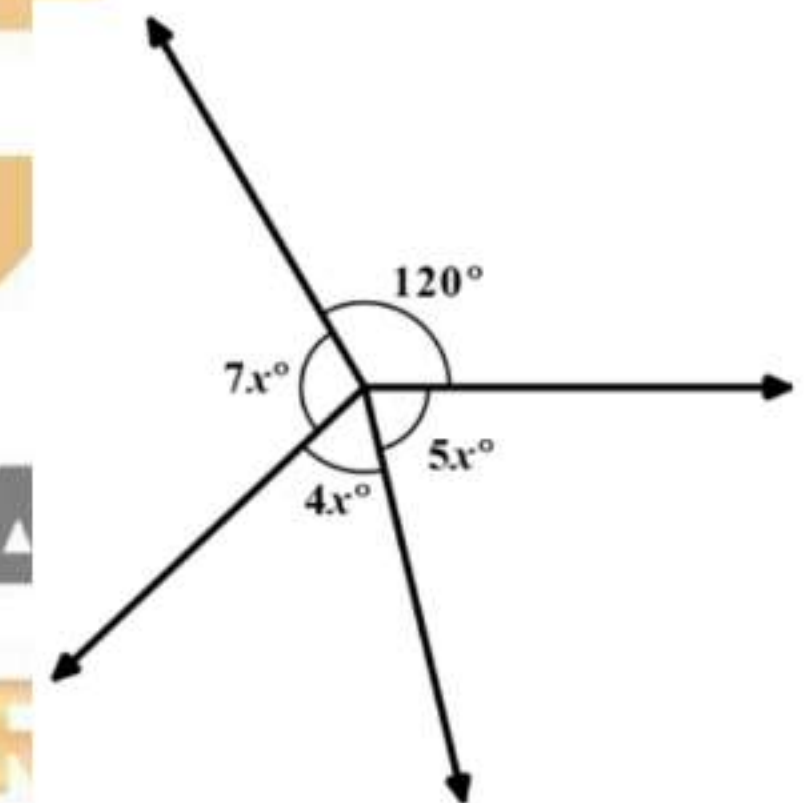
- (A) Two right angles (B) Three right angles
(C) Four right angles (D) Five right angles

35) The sum of the measures of 4 angles around a point is The sum of the measure of 5 angles around a point.

- (A) = (B) < (C) > (D) $\neq$

36) In the opposite figure:

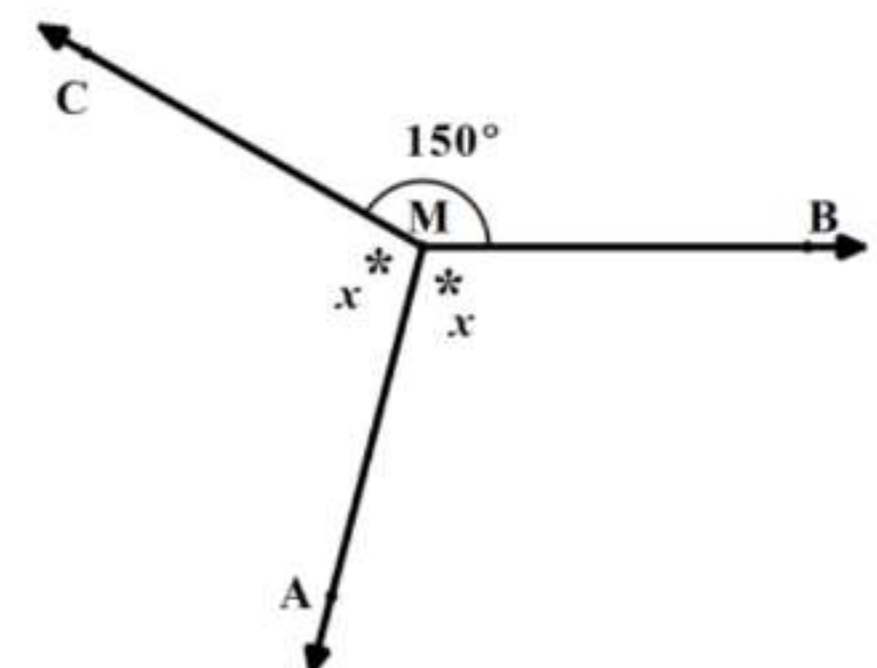
What is the value of x ?



- (A) 5° (B) 15° (C) 60° (D) 240°

37) In the opposite figure:

What is the value of x ?



- (A) 210° (B) 180° (C) 135° (D) 105°

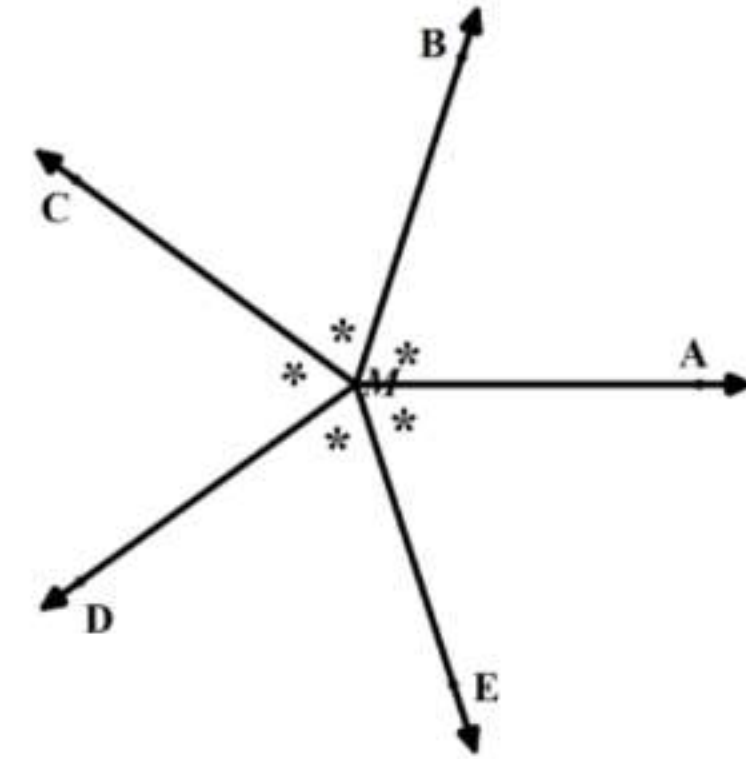
38) In the opposite figure:

What is the measure of $\angle AMC$?

(A) 60°

(B) 72°

(C) 144°



39) If the ratio among the measure of 3 angles around a point is $4 : 3 : 2$, then the measure of the greatest angle is

(A) 40°

(B) 80°

(C) 120°

(D) 160°

40) If L_1, L_2 , and L_3 are three lines in the same plane, $L_3 // L_1$ and $L_3 // L_2$, then:

(A) $L_3 \perp L_2$

(B) $L_3 \perp L_1$

(C) $L_2 // L_1$

(D) $L_2 \perp L_1$

41) If L_1, L_2 , and L_3 are three lines in the same plane, $L_3 // L_1$ and $L_2 \perp L_1$, then:

(A) $L_3 \perp L_1$

(B) $L_3 // L_2$

(C) $L_1 // L_2$

(D) L_2 coincides with L_3

42) If L_1, L_2 , and L_3 are three lines in the same plane, $L_2 \perp L_1$ and $L_3 // L_1$, then: $L_2 \dots L_3$

(A) $\perp$

(B) $//$

(C) coincide

(D) bisects

43) If a straight line intersects two parallel lines, then any two alternating angles are *equal in measure*

44) If a straight line intersects two straight lines and produces two alternating angles that are equal in measure, then the two straight lines are *Parallel*

45) If a straight line intersects two parallel straight lines, then any two corresponding angles are *equal in measure*

- 46) If a straight line intersects two straight lines and produces two corresponding angles that are equal in measure, then the straight lines are

.....**Parallel**

- 47) If a straight line intersects two parallel straight lines, then any two interior angles on the same side of the transversal are

Supplementary

- 48) If a straight line intersects two straight lines and the interior angles on the same side of the transversal are supplementary, then the two straight lines are

Parallel

- 49) The two lines parallel to a third line are

(A) perpendicular

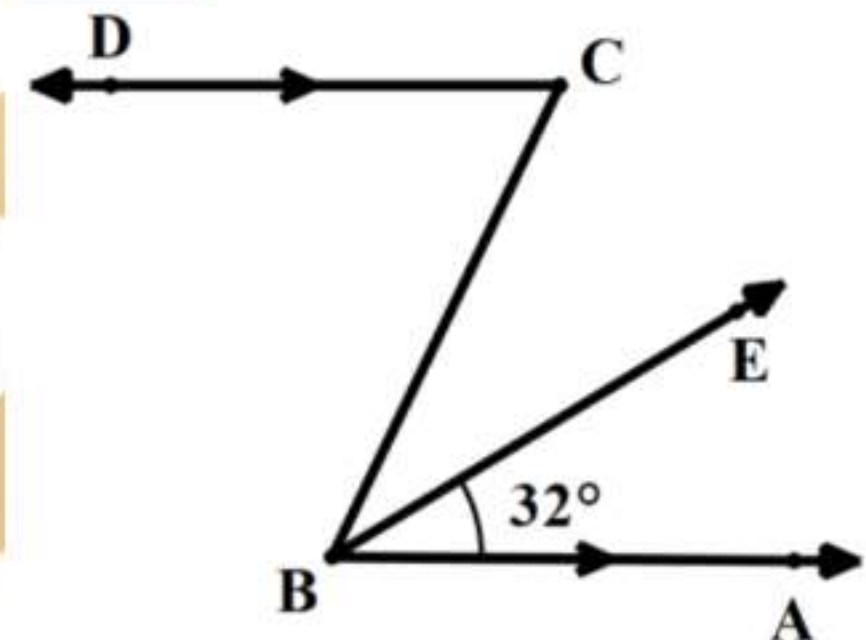
(B) coincident

(C) **parallel**

(D) intersecting

- 50) In the opposite figure:

$\overrightarrow{BE}$ bisects $\angle ABC$, $\overrightarrow{CD} \parallel \overrightarrow{BA}$, then $m(\angle C) = \dots$



(A) 32°

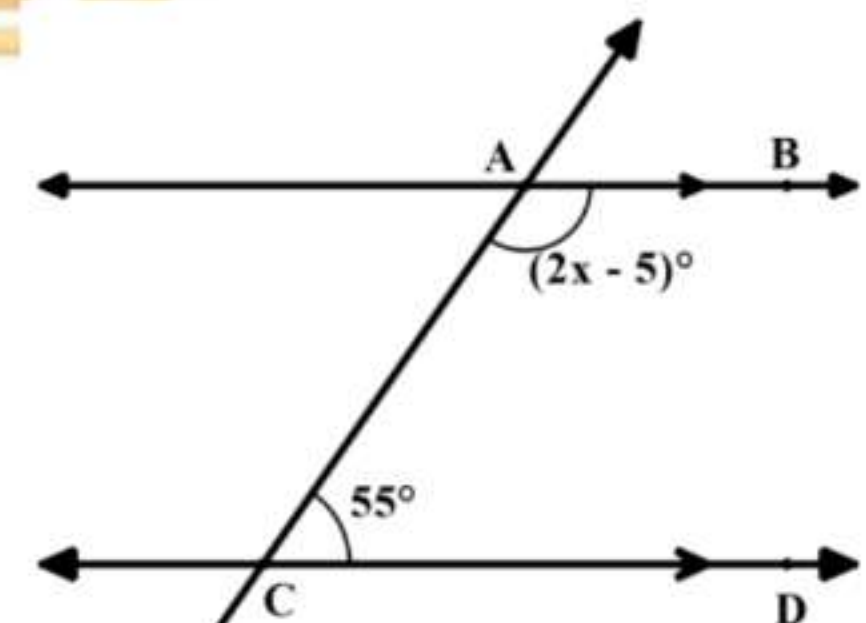
(B) **64°**

(C) 60°

(D) 80°

- 51) In the opposite figure:

What is the value of x ?



(A) 125°

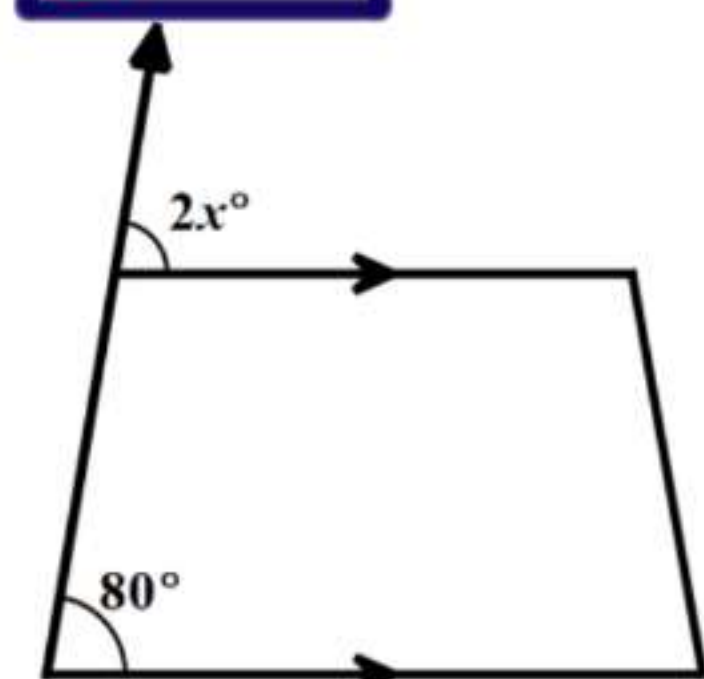
(B) 130°

(C) 135°

(D) **65°**

- 52) In the opposite figure:

What is the value of x ?



(A) **40°**

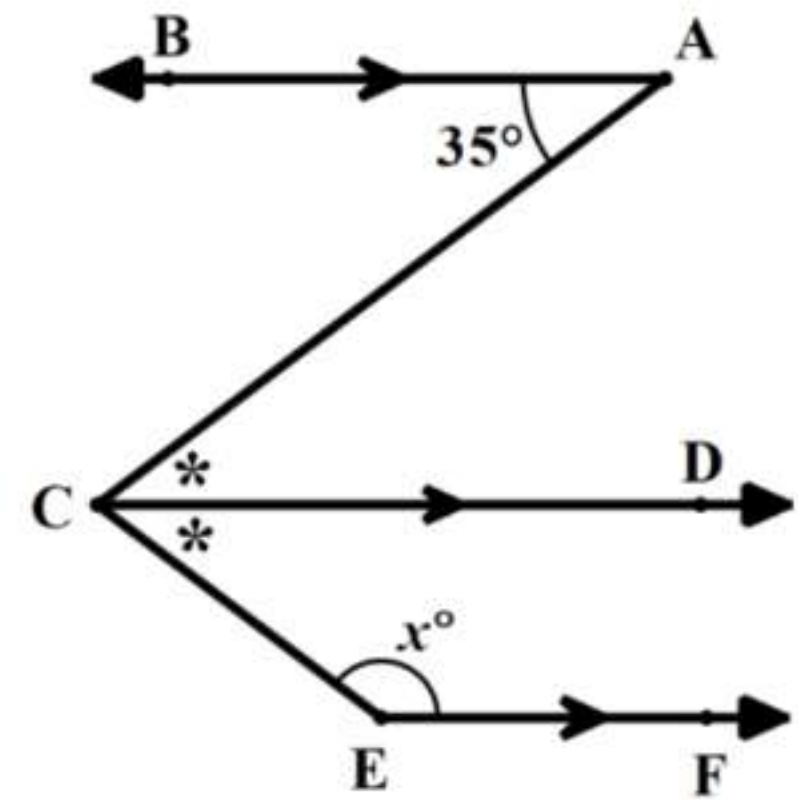
(B) 60°

(C) 80°

(D) 100°

53) In the opposite figure:

What is the value of x ?



(A) 35°

(B) 85°

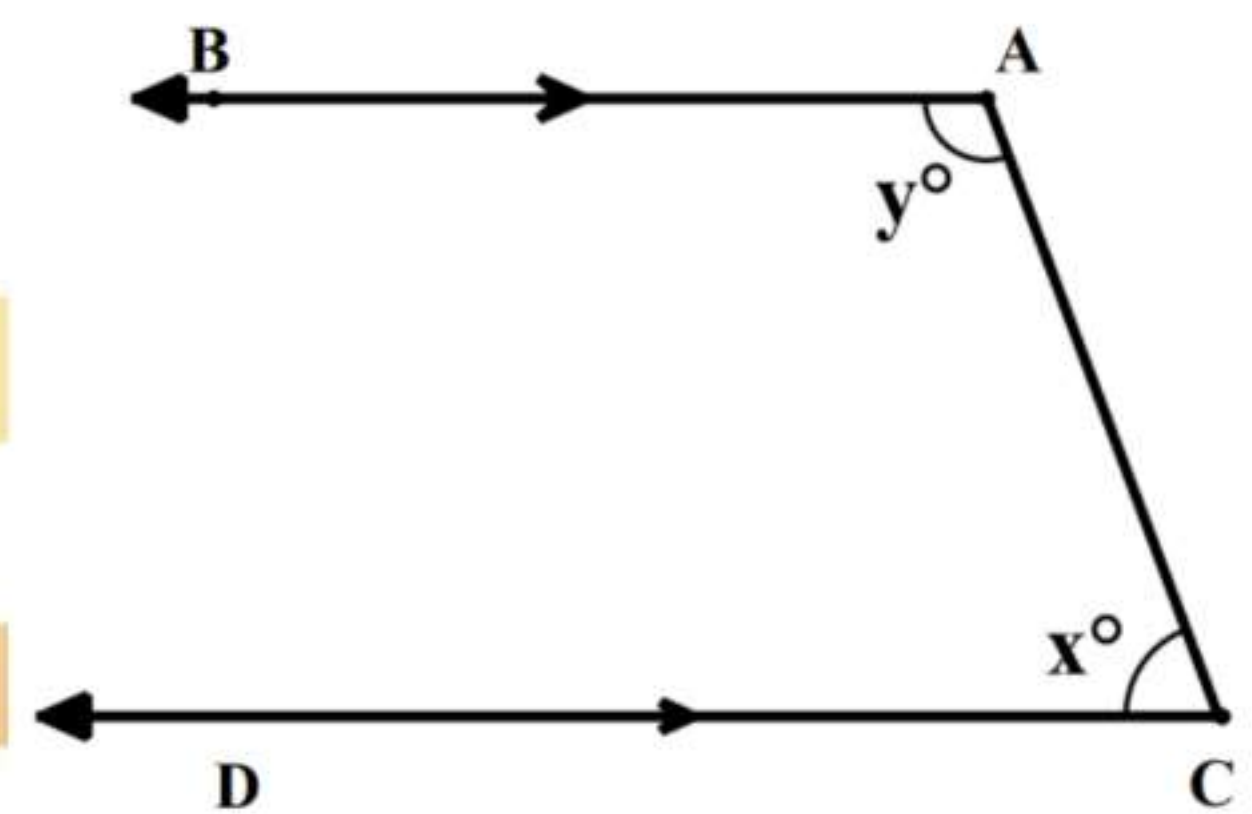
(C) 135°

(D) 145°

54) In the opposite figure:

$$\overrightarrow{AB} \parallel \overrightarrow{CD}$$

$$\frac{x}{y} = \frac{7}{11} \text{ What is the value of } x?$$



(A) 60°

(B) 70°

(C) 100°

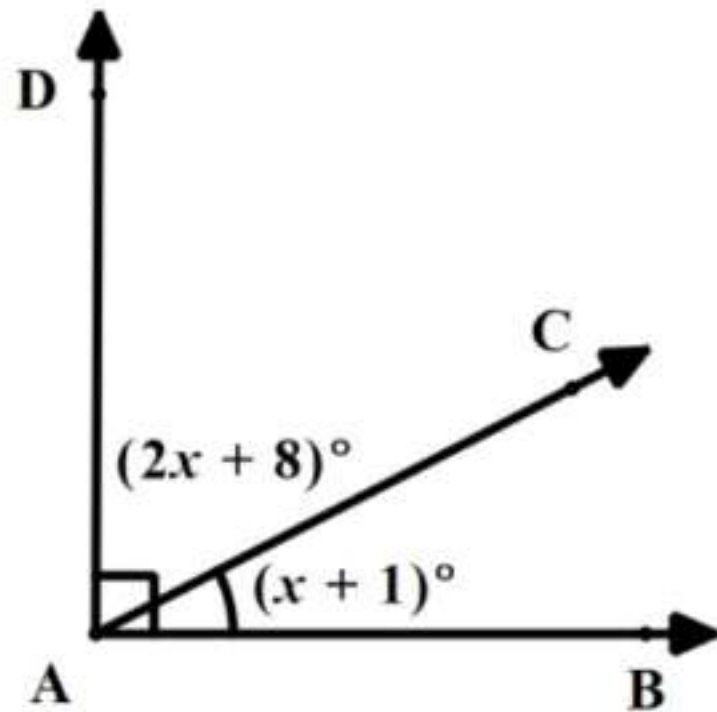
(D) 110°

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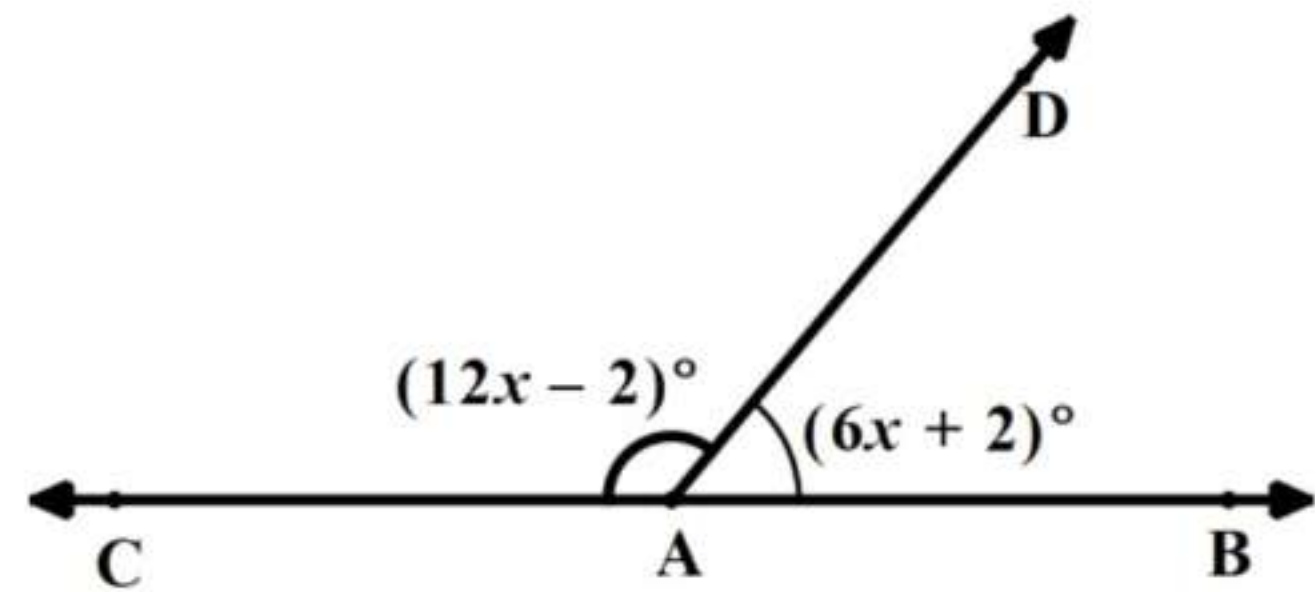
2

Answer the following questions

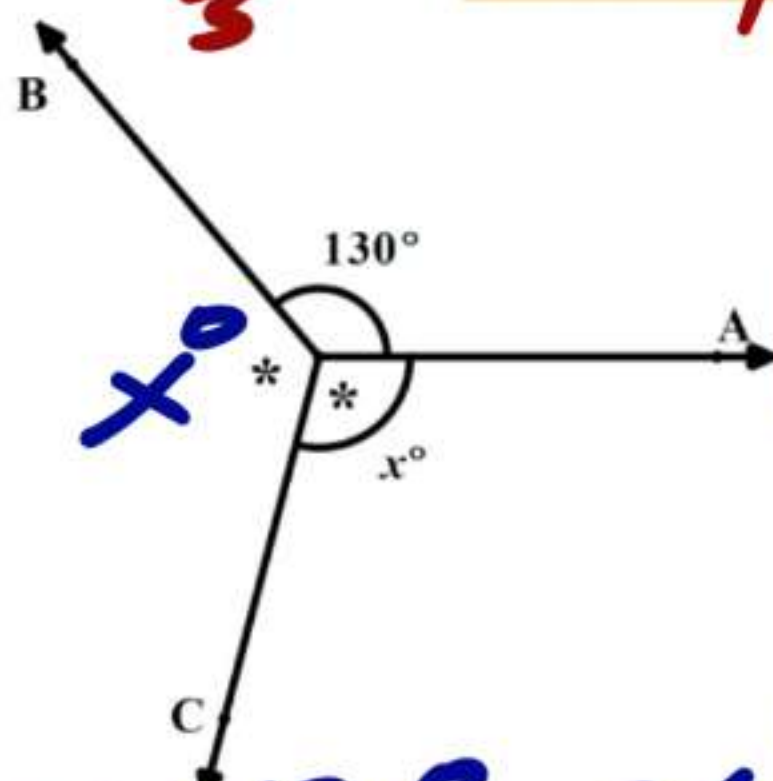
1) Find the value of x



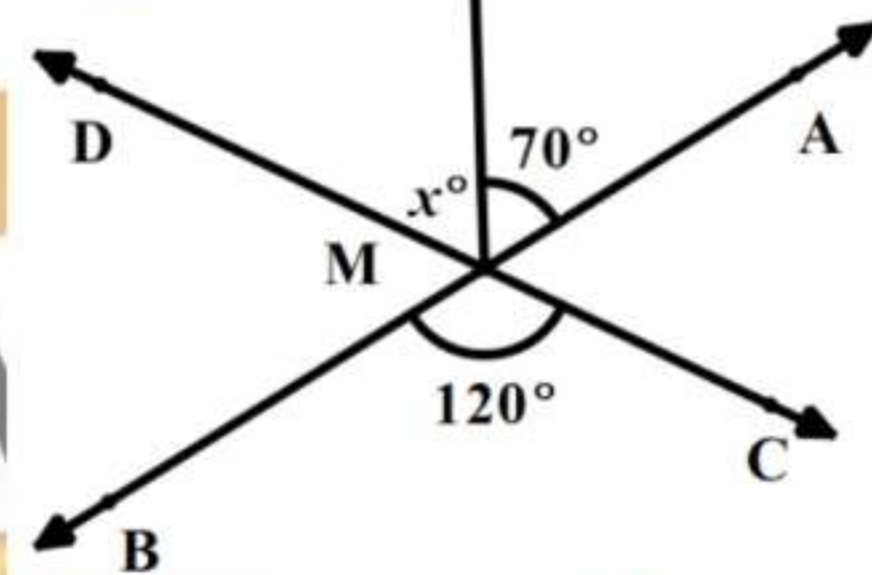
$$\begin{aligned} 2x + 8 + x + 1 &= 90^\circ \\ 3x + 9 &= 90^\circ \\ 3x &= 90^\circ - 9^\circ \\ 3x &= 81^\circ \\ x &= \frac{81^\circ}{3} \\ x &= 27^\circ \end{aligned}$$



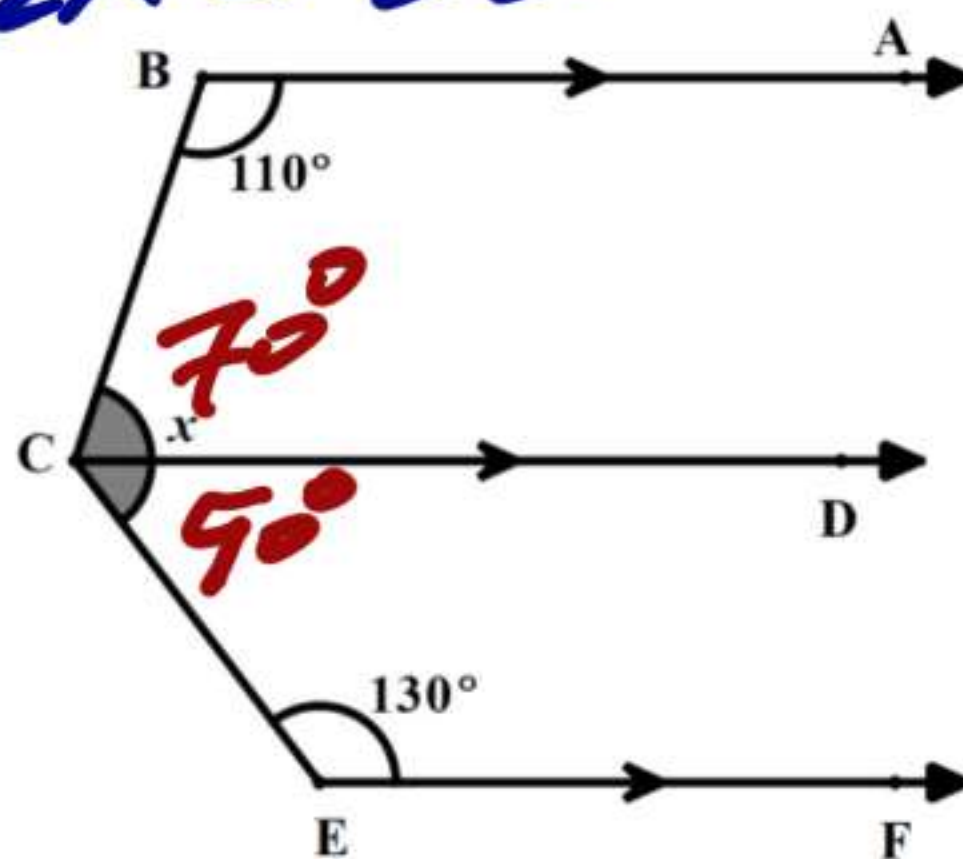
$$\begin{aligned} 12x - 2 + 6x + 2 &= 180 \\ 18x &= 180 \\ x &= \frac{180}{18} \\ x &= 10^\circ \end{aligned}$$



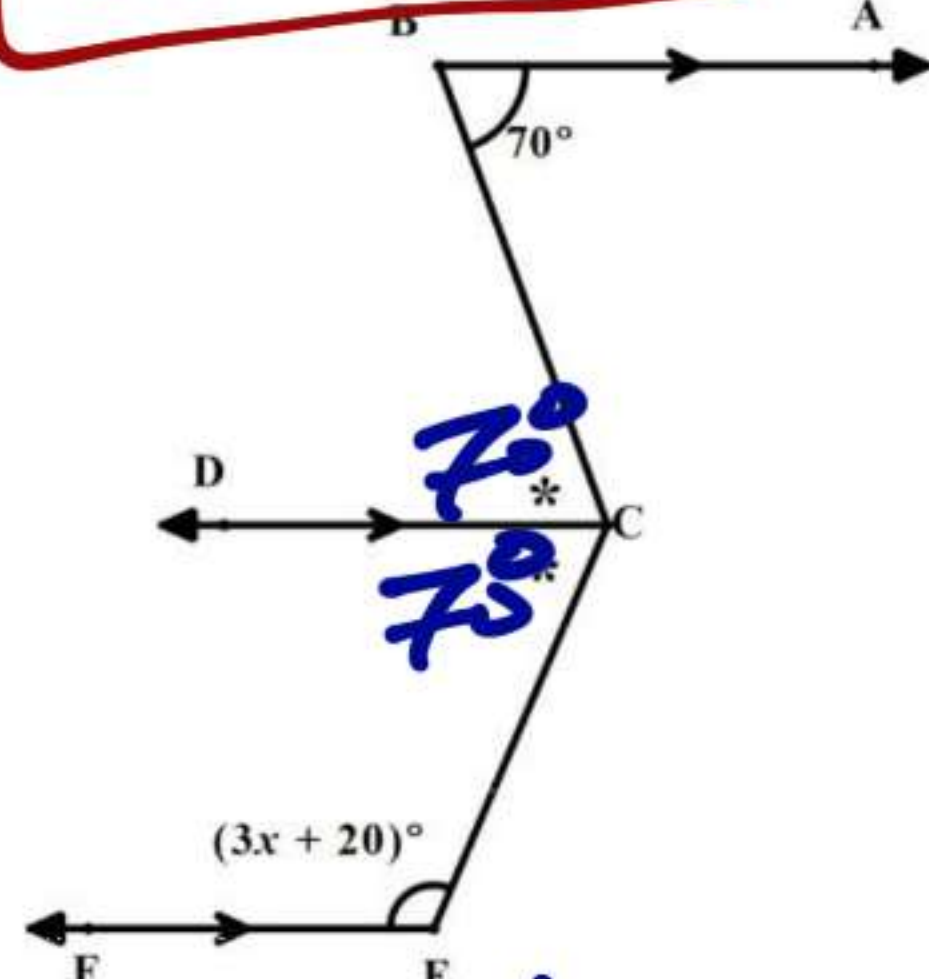
$$\begin{aligned} x + x + 130^\circ &= 360^\circ \\ 2x + 130^\circ &= 360^\circ \\ 2x &= 360^\circ - 130^\circ \\ 2x &= 230^\circ \\ x &= \frac{230^\circ}{2} \\ x &= 115^\circ \end{aligned}$$



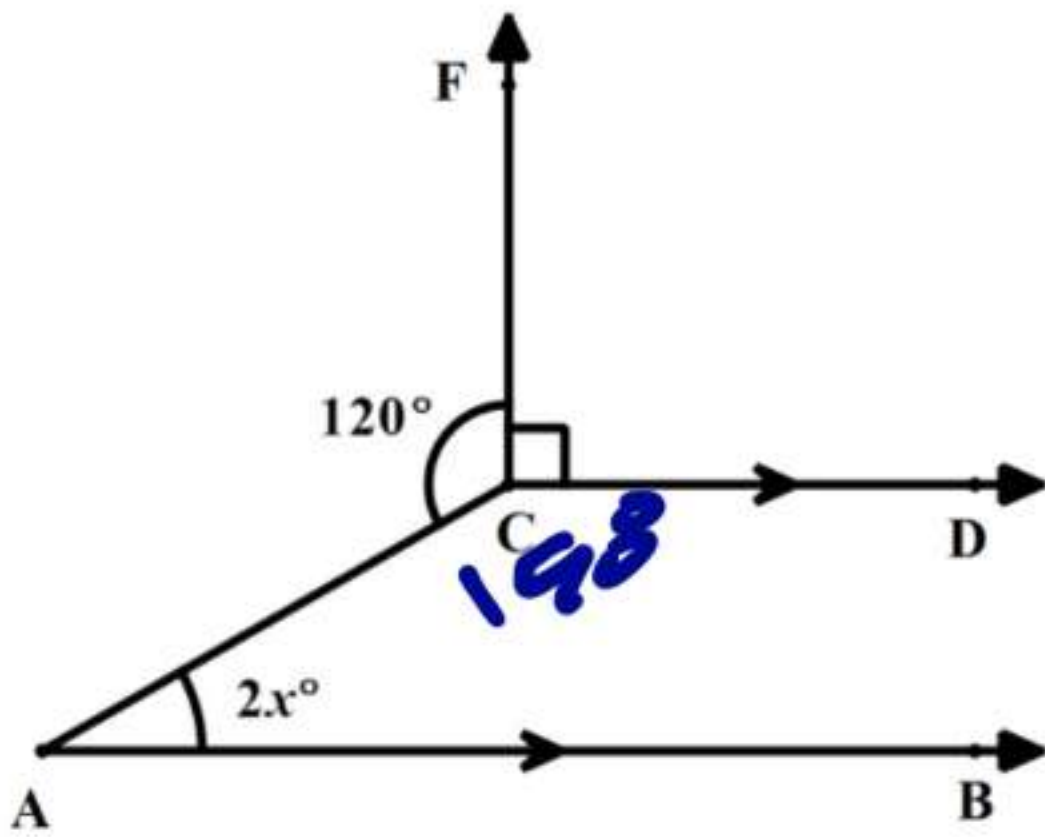
$$\begin{aligned} x + 70^\circ &= 120^\circ \\ x &= 120^\circ - 70^\circ \\ x &= 50^\circ \end{aligned}$$



$$\begin{aligned} x &= 70^\circ + 50^\circ \\ x &= 120^\circ \end{aligned}$$



$$\begin{aligned} 3x + 20^\circ + 70^\circ &= 180^\circ \\ 3x + 90^\circ &= 180^\circ \\ 3x &= 180^\circ - 90^\circ \\ 3x &= 90^\circ \\ x &= \frac{90^\circ}{3} \\ x &= 30^\circ \end{aligned}$$



$$m(\angle ACD) = 360^\circ - [90^\circ + 120^\circ] \\ = 150^\circ$$

$$2x + 150^\circ = 180^\circ$$

$$2x = 180^\circ - 150^\circ$$

$$2x = \frac{30^\circ}{2}$$

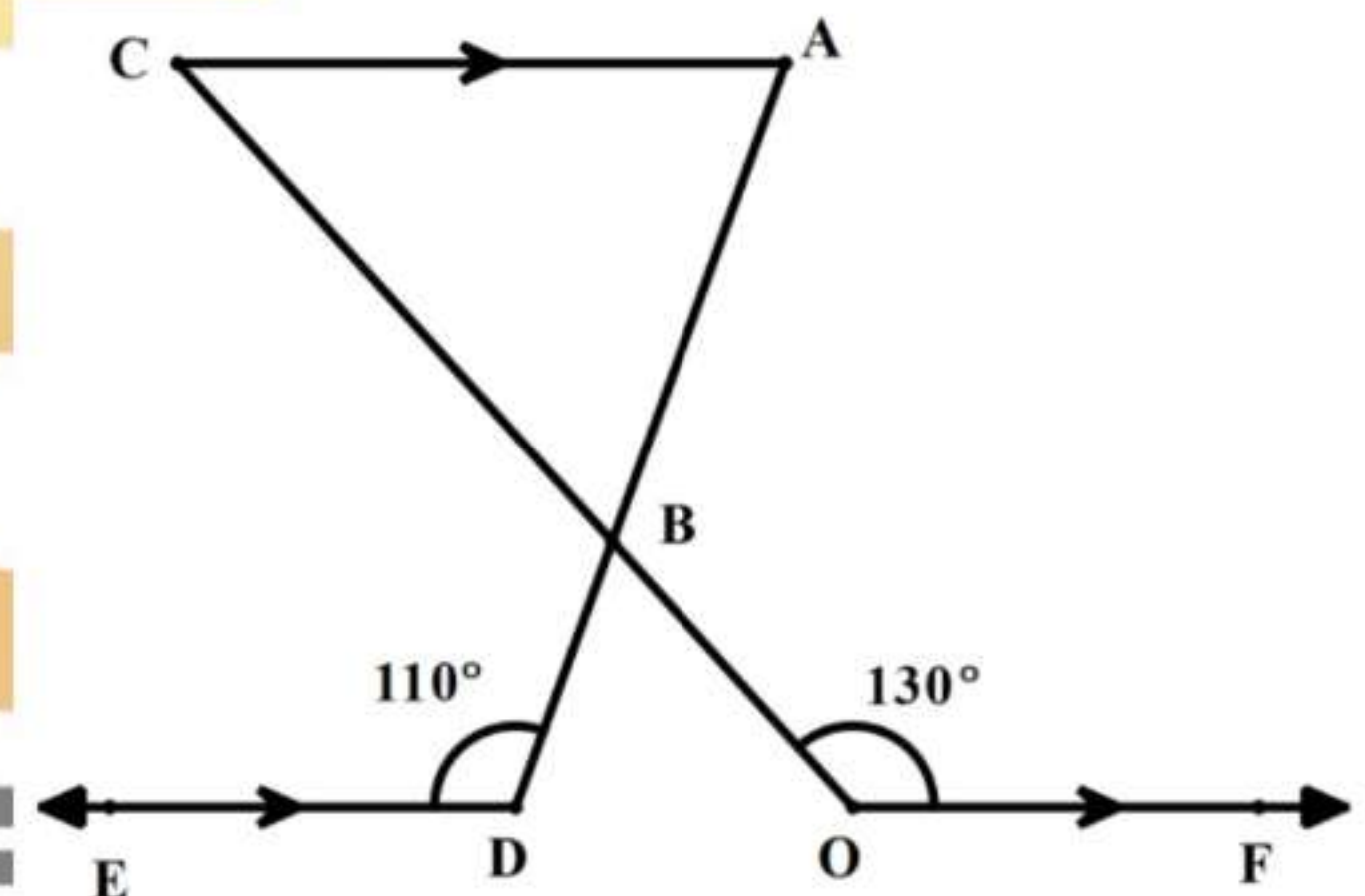
$$x = 15$$

2) In the opposite figure:

$$\overline{AC} \parallel \overline{DE} \parallel \overline{OF}$$

$$m(\angle ADE) = 110^\circ, m(\angle COF) = 130^\circ$$

Find : $m(\angle OBD)$



في الصفحة القادمة

2 $\because \overline{AC} \parallel \overrightarrow{DE}$, $\overline{AD}$ is a transversal

$$\therefore m(\angle A) + m(\angle D) = 180^\circ \text{ Interior angles}$$

$$\therefore m(\angle A) = 180^\circ - 110^\circ = 70^\circ$$

$\because \overline{AC} \parallel \overrightarrow{OF}$, $\overline{OC}$ is a transversal

$$\therefore m(\angle C) + m(\angle O) = 180^\circ \text{ Interior angles}$$

$$\therefore m(\angle C) = 180^\circ - 130^\circ = 50^\circ$$

in $\triangle ABC$

$\because$ Sum of interior angles of $\triangle ABC = 180$

$$\therefore m(\angle ABC) = 180^\circ - [70^\circ + 50^\circ] = 60^\circ$$

$$\therefore m(\angle OBD) = m(\angle ABC) = 60^\circ \text{ V.o.A}$$

~~77~~

حمل الآن

مجاناً وحصرياً

المراجعة رقم (5)

اختبار شهر نوفمبر



Q1: Choose the correct answer

1 If $2ab = 10$, then $3ab = \dots\dots\dots$ ☐ a 5☐ b 6☐ c 15☐ d 302 The solution set of the equation $4x = -12$ in N is $\dots\dots\dots$ ☐ a $\{-3\}$ ☐ b $\{3\}$ ☐ c $\emptyset$ ☐ d $\{0\}$ 3 The additive inverse of $x - 5$ is $\dots\dots\dots$ ☐ a $x - 5$ ☐ b $-x - 5$ ☐ c $-x + 5$ ☐ d 54 $2x = 2$, then $3x - 1 = \dots\dots\dots$ ☐ a 2☐ b 3☐ c 4☐ d 55 If $5x + 8x + 2x + 4x = 114$, then $5x + 3 = \dots\dots\dots$ ☐ a 33☐ b 35☐ c 47☐ d $8x$ 6 $7x + 5y + z$ increases $2x - y + z$ by $\dots\dots\dots$ ☐ a $5x + 4y + 2z$ ☐ b $5x + 6y$ ☐ c $9x + 4y$ ☐ d $9x - 6y - 2z$ 7 If $x + 3 = 5$, $x \in Z^-$, Then the solution set is $\dots\dots\dots$ ☐ a $\{-3\}$ ☐ b $\{5\}$ ☐ c $\{-5\}$ ☐ d $\emptyset$ 8 The sum of $x + 2y - 3z$ and $-2y - x - 3z$ is $\dots\dots\dots$ ☐ a $-6z$ ☐ b zero☐ c $6z$ ☐ d $2x - 4y + 6z$ 9 If $x + 2 = |-4|$, then $x = \dots\dots\dots$ ☐ a -2☐ b 2☐ c 6☐ d -610 Which of the following equations is equivalent to the equation $x + 3 = 12$ ☐ a $x - 3 = -12$ ☐ b $x + (-3) = 12$ ☐ c $x - (-3) = 12$ ☐ d $x - (-3) = -12$ 

11 Which of the following algebraic terms is like the algebraic term $2x^2y^2$?

(a) $2y^2x$

(b) yx^2

(c) $2x^2$

(d) x^2y^2

12 $4x$ increases ($-4x$) by

(a) zero

(b) $8x$

(c) $-8x$

(d) $16x$

13 $k + k + k = \dots\dots\dots$

(a) k^3

(b) $3k$

(c) $3k^3$

(d) $k + 3$

14 $2x^2 + 4x^2 = \dots\dots\dots$

(a) $6x^4$

(b) $6x^2$

(c) $8x^2$

(d) $8y^4$

15 The expression: $2x + 3y$ exceeds $3y - 2x$ by

(a) $-6y$

(b) $-4x$

(c) $4x$

(d) $6y$

16 The result of subtracting $7a$ from $15a$ is

(a) $-8a$

(b) $8a$

(c) $8a^2$

(d) $-22a$

17 The solution set of the equation: $2(x - 4) = 0$ in Q is

(a) $\{-4\}$

(b) $\{4\}$

(c) $\{0\}$

(d) $\{8\}$

18 Which of the following equations has no solution in Z ?

(a) $6x = 24$

(b) $6x = 15$

(c) $6x = 18$

(d) $6x = 12$

19 If the substitution set is $\{1, 4, 2\}$, then the solution set of the equation $2x = 10$ is

(a) $\{5\}$

(b) $\{2\}$

(c) $\{1\}$

(d) $\emptyset$

20 Two consecutive odd numbers add up to 28. Which of the following equations expresses this?

(a) $x + x + 1 = 28$

(b) $2x + 1 = 28$

(c) $2x - 1 = 28$

(d) $2x + 2 = 28$



Q2: Answer The Following

- 1 Add the expressions: $3a - 2b$ and $2a + 5b$ then find the numerical values of the result when $a = 2$ and $b = 1$.

- 2 Simplify: $5(a - 2b) + 3(4a + b)$ in its simplest form

- 3 $2a^2 - 3ab - 5b^2$ decreases $4a^2 + 3b^2 + ab$ by

- 4 The coefficient of the algebraic term $-3k^3$ is

- 5 The perimeter of the rectangle whose dimensions are $7y$, $4y$ is

- 6 The decrease of $-3ab$ than $2ab$ is

- 7 $5a^2b - \dots = 7a^2b$

- 8 $5x$ increases $(-5x)$ by

- 9 Write the following expressions in the simplest form:

Ⓐ $-5x - 7y - 7x - 2y + 7y - 3x$

Ⓑ $2(3x - 4) - 3(x - 2)$

- 10 Find in Z the solution set of the equation: $2x - 5 = -17$



11 Find the S.S of the following equations in Q:

a $4(x + 1) = 2(x - 1)$

b $3x + 6 = 30 - 5x$

c $3y + 6(y + 3) - (8y - 16) = 66$

d $a + 5a - 2 = 2(3 - a)$

12 Two integer numbers their difference is 12 and the smaller is m, then the greater is

13 A parallelogram with a base length of 12 cm. Its corresponding height is $(3x - 1)$ cm and its area is 60 squared centimeter, then $x = \dots\dots\dots$

14 If $x + 9 = 11$, then the value of: $7x = \dots\dots\dots$

15 $2(x + 3) = 20$, Then the value of $x = \dots\dots\dots$

16 The difference between two natural numbers is 5 and their sum is 21
What are the two numbers ?

17 The solution set of $3x - 1 = 2x + 5$, where $x \in \mathbb{N}$ is

18 The number when added to its triple becomes 72 is

19 If x is an odd number, then the next odd number to it is

20 The solution set in $\mathbb{N}$ of $7.4 - y = 2.4$ is

21 The set of substitution is $\{1, 2, 3, 4\}$, then the set of solution of the equation $x + 6 = 10$ is



22 Find the S.S of the following equations in N:

a $6x - 2x + 7 = 4$

b $4(x - 1) = 3(x + 1)$

c $-2(x + 1) = 3$

d $3(x - 2) = 5x - 10$

23 Three consecutive numbers whose sum is 213, what are there numbers?

24 Find in Z the solution set of the equation: $3x + 5 = 17$

25 If: $5n = 20$ find the value of: $8 - 2n$

26 If $(x + 1)$ is the additive inverse of (-2) , then $x = \dots\dots\dots$

27 Two integers, their sum is 5, if one of them is x , then the other one is $\dots\dots\dots$

28 Express the following situation with a suitable equation:
The sum of two consecutive odd integers is 32

29 Three consecutive numbers whose sum is 102, what are the numbers?



Q1: Choose the correct answer

1 The sum of the measures of 4 angles around a point is the sum of the measures of 5 angles around a point.

(a) $>$

(b) $=$

(c) $<$

(d) $\geq$

2 In the opposite figure:

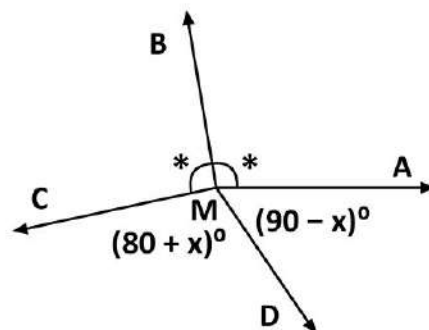
What is the measure of $\angle AMB$?

(a) 190°

(b) 95°

(c) 90°

(d) 80°



3 The sum of supplementary angles equals the sum of the measures of angles.

(a) 2 right

(b) 4 right

(c) 3 right

(d) 5 right

4 If angle measure Y complements an angle of measure

(a) $180^\circ - Y$

(b) $90^\circ - Y$

(c) $180^\circ + Y$

(d) $90^\circ + Y$

5 The zero angle complements angle.

(a) zero

(b) acute

(c) obtuse

(d) right

6 The angle of measure 179° is a/an angle

(a) acute

(b) straight

(c) obtuse

(d) right

7 If $\angle X$ complements $\angle Y$, $m(\angle X) = 2m(\angle Y)$, then $m(\angle Y) = \dots\dots\dots$

(a) 45°

(b) 30°

(c) 60°

(d) 90°

8 Obtuse angle supplements angle.

(a) acute

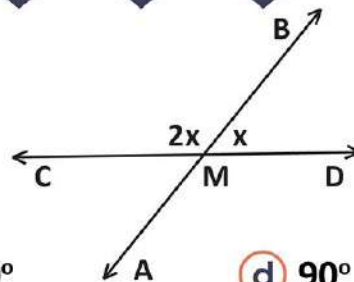
(b) straight

(c) obtuse

(d) right



- 9 If two straight lines AB and CD intersect at M, then $m(\angle AMC) = \dots\dots\dots$



- (a) 30° (b) 45° (c) 60° (d) 90°

- 10 If the ratio of two supplementary angles is 5 : 13, then the measure of the smaller angle is

- (a) 50° (b) 130° (c) 150° (d) 180°

- 11 The sum of accumulative angles at a point equals the sum of the measures of angles.

- (a) 2 rights (b) 4 rights
(c) 3 rights (d) 5 right

- 12 If the ratio of measures of three accumulative angles 5 : 3 : 4, Then the measure of the greatest angle is $^\circ$.

- (a) 30° (b) 150° (c) 180° (d) 90°

- 13 If the ratio of two complementary angles is 7 : 11, then the measure of the smaller angle is

- (a) 145° (b) 190° (c) 90° (d) 35°

- 14 If the two vertically angles are complementary angles, the the measure of each angle is

- (a) 45° (b) 50° (c) 180° (d) 90°

- 15 If two straight lines intersect, then each two vertically angles are

- (a) supplementary (b) adjacent
(c) equal in measure (d) complementary



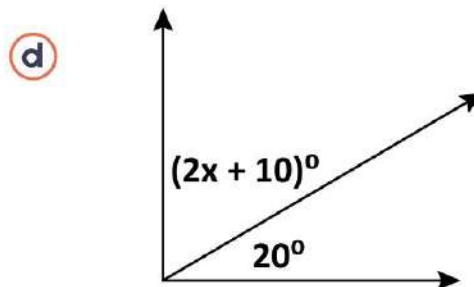
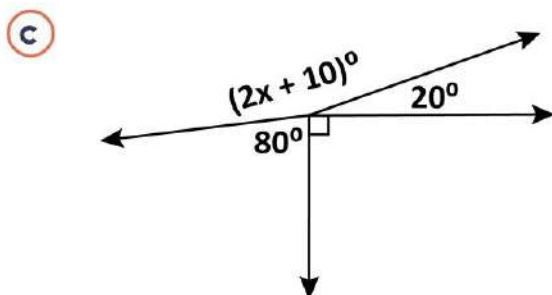
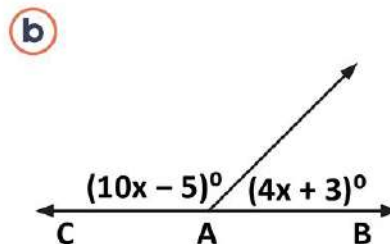
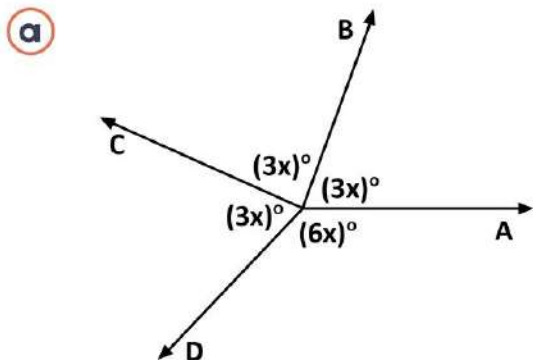
Q2: Answer The Following

1 The angle of measure 70° is vertically opposite to an angle of measure

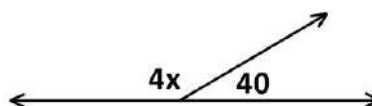
2 If the $m(\angle A) = \frac{1}{2} m(\angle B)$, $m(\angle A) = 30^\circ$, the two angles A and B are

3 The two vertically opposite angles are complementary, then the measure of each angle equals

4 Find the value of x of the following:



5 Find the value of x =



6 Zero angle supplements angle.

7 If $\angle A$ complements $\angle B$ and $m(\angle A) = \frac{2}{3} m(\angle B)$, then $m(\angle B) = \dots\dots\dots^\circ$

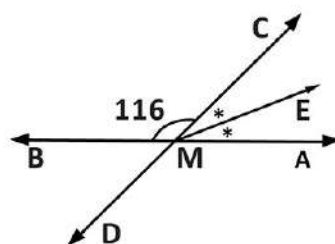
8 The sum of measure of accumulative angles at a point equals $^\circ$

9 If $m(\angle A) = 46^\circ$. then $m(\text{reflex } \angle A) = \dots\dots\dots^\circ$

10 $\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, $m(\angle CMB) = 116^\circ$

, $\overrightarrow{ME}$ bisects $\angle AMC$

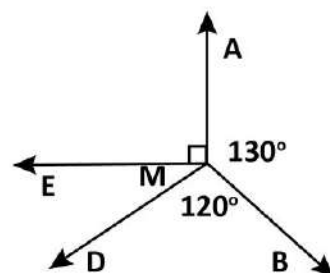
Find: $m(\angle AMD)$, $m(\angle AMC)$, $m(\angle AME)$



11 In the opposite figure:

$\overrightarrow{MA} \perp \overrightarrow{ME}$

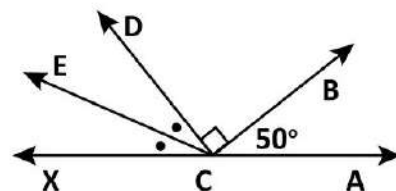
Find $m(\angle EMD)$



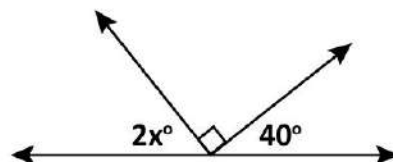
12 In the opposite figure:

$\overrightarrow{CE}$ bisects $\angle DCX$

Find $m(\angle ECA)$



13 Find the value of x



Q1: Choose the correct answer

1 If $2ab = 10$, then $3ab = \dots\dots\dots$ ☐ a 5☐ b 6☒ c 15☐ d 302 The solution set of the equation $4x = -12$ in N is $\dots\dots\dots$ ☐ a $\{-3\}$ ☐ b $\{3\}$ ☒ c $\emptyset$ ☐ d $\{0\}$ 3 The additive inverse of $x - 5$ is $\dots\dots\dots$ ☐ a $x - 5$ ☐ b $-x - 5$ ☒ c $-x + 5$ ☐ d 54 $2x = 2$, then $3x - 1 = \dots\dots\dots$ ☒ a 2☐ b 3☐ c 4☐ d 55 If $5x + 8x + 2x + 4x = 114$, then $5x + 3 = \dots\dots\dots$ ☒ a 33☐ b 35☐ c 47☐ d $8x$ 6 $7x + 5y + z$ increases $2x - y + z$ by $\dots\dots\dots$ ☐ a $5x + 4y + 2z$ ☒ b $5x + 6y$ ☐ c $9x + 4y$ ☐ d $9x - 6y - 2z$ 7 If $x + 3 = 5$, $x \in Z^-$, Then the solution set is $\dots\dots\dots$ ☐ a $\{-3\}$ ☐ b $\{5\}$ ☐ c $\{-5\}$ ☒ d $\emptyset$ 8 The sum of $x + 2y - 3z$ and $-2y - x - 3z$ is $\dots\dots\dots$ ☒ a $-6z$ ☐ b zero☐ c $6z$ ☐ d $2x - 4y + 6z$ 9 If $x + 2 = |-4|$, then $x = \dots\dots\dots$ ☐ a -2☒ b 2☐ c 6☐ d -610 Which of the following equations is equivalent to the equation $x + 3 = 12$ ☐ a $x - 3 = -12$ ☐ b $x + (-3) = 12$ ☒ c $x - (-3) = 12$ ☐ d $x - (-3) = -12$ 

11 Which of the following algebraic terms is like the algebraic term $2x^2y^2$?

☐ a $2y^2x$

☐ b yx^2

☐ c $2x^2$

☒ d x^2y^2

12 $4x$ increases $(-4x)$ by

☐ a zero

☒ b $8x$

☐ c $-8x$

☐ d $16x$

13 $k + k + k = \dots\dots\dots$

☐ a k^3

☒ b $3k$

☐ c $3k^3$

☐ d $k + 3$

14 $2x^2 + 4x^2 = \dots\dots\dots$

☐ a $6x^4$

☒ b $6x^2$

☐ c $8x^2$

☐ d $8y^4$

15 The expression: $2x + 3y$ exceeds $3y - 2x$ by

☐ a $-6y$

☐ b $-4x$

☒ c $4x$

☐ d $6y$

16 The result of subtracting $7a$ from $15a$ is

☐ a $-8a$

☒ b $8a$

☐ c $8a^2$

☐ d $-22a$

17 The solution set of the equation: $2(x - 4) = 0$ in Q is

☐ a $\{-4\}$

☒ b $\{4\}$

☐ c $\{0\}$

☐ d $\{8\}$

18 Which of the following equations has no solution in Z ?

☐ a $6x = 24$

☒ b $6x = 15$

☐ c $6x = 18$

☐ d $6x = 12$

19 If the substitution set is $\{1, 4, 2\}$, then the solution set of the equation $2x = 10$ is

☐ a $\{5\}$

☐ b $\{2\}$

☐ c $\{1\}$

☒ d $\emptyset$

20 Two consecutive odd numbers add up to 28. Which of the following equations expresses this?

☐ a $x + x + 1 = 28$

☐ b $2x + 1 = 28$

☐ c $2x - 1 = 28$

☒ d $2x + 2 = 28$



Q2: Answer The Following

- 1 Add the expressions: $3a - 2b$ and $2a + 5b$ then find the numerical values of the result when $a = 2$ and $b = 1$.

$$5a + 3b; \text{ value at } a=2, b=1 \rightarrow 13$$

- 2 Simplify: $5(a - 2b) + 3(4a + b)$ in its simplest form

$$17a - 7b$$

- 3 $2a^2 - 3ab - 5b^2$ decreases $4a^2 + 3b^2 + ab$ by

$$2a^2 + 8b^2 + 4ab$$

- 4 The coefficient of the algebraic term $-3k^3$ is-3...

- 5 The perimeter of the rectangle whose dimensions are $7y$, $4y$ is22y.

- 6 The decrease of $-3ab$ than $2ab$ is5ab...

- 7 $5a^2b - \dots - 2a^2b = 7a^2b$

- 8 $5x$ increases $(-5x)$ by10x...

- 9 Write the following expressions in the simplest form:

$$\text{a) } -5x - 7y - 7x - 2y + 7y - 3x$$

$$\text{b) } 2(3x - 4) - 3(x - 2)$$

$$-15x - 2y$$

$$3x - 2$$

- 10 Find in Z the solution set of the equation: $2x - 5 = -17$

$$\{-6\}$$



11 Find the S.S of the following equations in Q:

a $4(x + 1) = 2(x - 1)$

{-3}

b $3x + 6 = 30 - 5x$

{-3}

c $3y + 6(y + 3) - (8y - 16) = 66$

{32}

d $a + 5a - 2 = 2(3 - a)$

{1}

12 Two integer numbers their difference is 12 and the smaller is m, then the greater is **m + 12**

13 A parallelogram with a base length of 12 cm. Its corresponding height is $(3x - 1)$ cm and its area is 60 squared centimeter, then $x =$ **2**

14 If $x + 9 = 11$, then the value of: $7x =$ **14**

15 $2(x + 3) = 20$, Then the value of $x =$ **7**

16 The difference between two natural numbers is 5 and their sum is 21
What are the two numbers ?

13 and 8

17 The solution set of $3x - 1 = 2x + 5$, where $x \in \mathbb{N}$ is **{6}**

18 The number when added to its triple becomes 72 is **18**

19 If x is an odd number, then the next odd number to it is **x + 2**

20 The solution set in $\mathbb{N}$ of $7.4 - y = 2.4$ is **{5}**

21 The set of substitution is $\{1, 2, 3, 4\}$, then the set of solution of the equation $x + 6 = 10$ is **{4}**



22 Find the S.S of the following equations in N:

a $6x - 2x + 7 = 4$

$\emptyset$

b $4(x - 1) = 3(x + 1)$

$\{7\}$

c $-2(x + 1) = 3$

$\emptyset$

d $3(x - 2) = 5x - 10$

$\{2\}$

23 Three consecutive numbers whose sum is 213, what are there numbers?

70, 71, and 72

24 Find in Z the solution set of the equation: $3x + 5 = 17$

$\{4\}$

25 If: $5n = 20$ find the value of: $8 - 2n$

0

26 If $(x + 1)$ is the additive inverse of (-2) , then $x = \dots\dots\dots$

1

27 Two integers, their sum is 5, if one of them is x , then the other one is $\dots\dots\dots$

$5 - x$

28 Express the following situation with a suitable equation:

The sum of two consecutive odd integers is 32

$x + (x + 2) = 32$

29 Three consecutive numbers whose sum is 102, what are the numbers?

33, 34, and 35.



Q1: Choose the correct answer

1 The sum of the measures of 4 angles around a point is the sum of the measures of 5 angles around a point.

a >

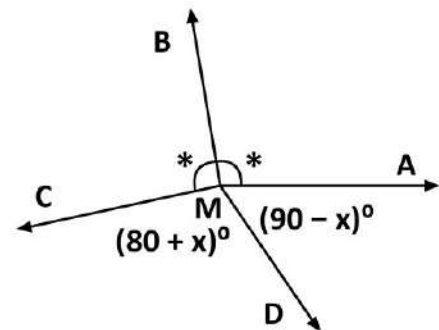
b =

c <

d ≥

2 In the opposite figure:

What is the measure of $\angle AMB$?

a 190° c 90° b 95° d 80° 

3 The sum of supplementary angles equals the sum of the measures of angles.

a 2 right

c 3 right

b 4 right

d 5 right

4 If angle measure Y complements an angle of measure

a $180^\circ - Y$ b $90^\circ - Y$ c $180^\circ + Y$ d $90^\circ + Y$

5 The zero angle complements angle.

a zero

b acute

c obtuse

d right

6 The angle of measure 179° is a/an angle

a acute

b straight

c obtuse

d right

7 If $\angle X$ complements $\angle Y$, $m(\angle X) = 2m(\angle Y)$, then $m(\angle Y) = \dots\dots\dots$

a 45° b 30° c 60° d 90°

8 Obtuse angle supplements angle.

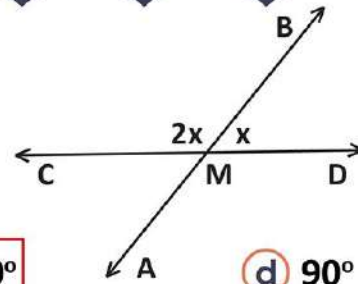
a acute

b straight

c obtuse

d right





- 9 If two straight lines AB and CD intersect at M, then $m(\angle AMC) = \dots\dots\dots$

(a) 30° (b) 45° (c) 60° (d) 90°

- 10 If the ratio of two supplementary angles is 5 : 13, then the measure of the smaller angle is

(a) 50° (b) 130° (c) 150° (d) 180°

- 11 The sum of accumulative angles at a point equals the sum of the measures of angles.

(a) 2 rights (b) 4 rights
(c) 3 rights (d) 5 right

- 12 If the ratio of measures of three accumulative angles 5 : 3 : 4, Then the measure of the greatest angle is $^\circ$.

(a) 30° (b) 150° (c) 180° (d) 90°

- 13 If the ratio of two complementary angles is 7 : 11, then the measure of the smaller angle is

(a) 145° (b) 190° (c) 90° (d) 35°

- 14 If the two vertically angles are complementary angles, then the measure of each angle is

(a) 45° (b) 50° (c) 180° (d) 90°

- 15 If two straight lines intersect, then each two vertically angles are

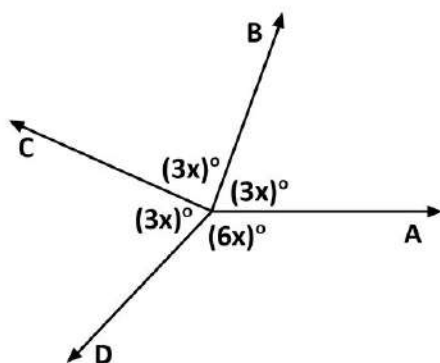
(a) supplementary (b) adjacent
(c) equal in measure (d) complementary



Q2: Answer The Following

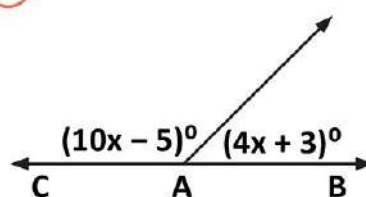
- The angle of measure 70° is vertically opposite to an angle of measure 70° .
- If the $m(\angle A) = \frac{1}{2} m(\angle B)$, $m(\angle A) = 30^\circ$, the two angles A and B are **complementary**.
- The two vertically opposite angles are complementary, then the measure of each angle equals 45° .
- Find the value of x of the following:

a



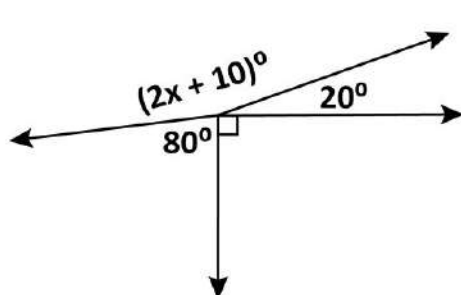
15

b



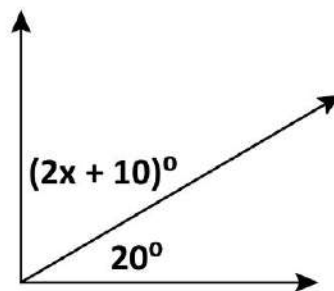
13

c



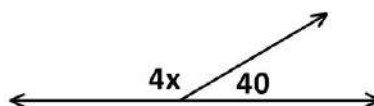
35

d



30

- Find the value of x = 35 .



6 Zero angle supplements **straight** angle.

7 If $\angle A$ complements $\angle B$ and $m(\angle A) = \frac{2}{3} m(\angle B)$, then $m(\angle B) = \mathbf{54}^\circ$

8 The sum of measure of accumulative angles at a point equals **360** $^\circ$

9 If $m(\angle A) = 46^\circ$. then $m(\text{reflex } \angle A) = \mathbf{314}^\circ$

10 $\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, $m(\angle CMB) = 116^\circ$

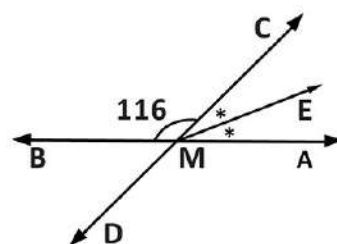
, $\overrightarrow{ME}$ bisects $\angle AMC$

Find: $m(\angle AMD)$, $m(\angle AMC)$, $m(\angle AME)$

116

64

32

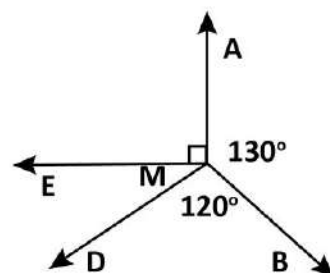


11 In the opposite figure:

$\overrightarrow{MA} \perp \overrightarrow{ME}$

Find $m(\angle EMD)$

20

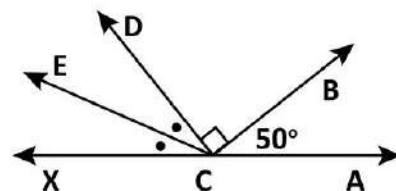


12 In the opposite figure:

$\overrightarrow{CE}$ bisects $\angle DCX$

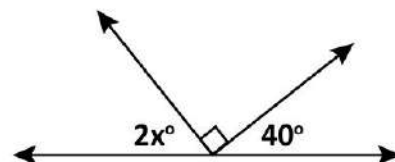
Find $m(\angle ECA)$

95



13 Find the value of x

70



حمل الآن

مجاناً وحصرياً

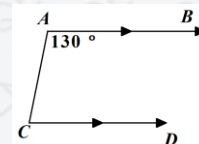
المراجعة رقم (6)

اختبار شهر نوفمبر

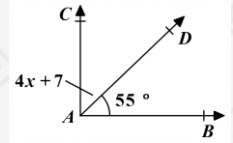
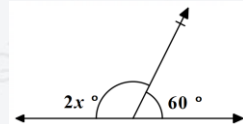


Question 1 : Choose the correct answer :

- 1 Which is the suitable equation to find the side length of an equilateral triangle whose perimeter is 12 cm ?
 (a) $x + 3 = 12$ (b) $3x = 12$ (c) $2x = 12$ (d) $x = 12$
- 2 Hazm is x years old now seven years ago he was 18 years old. Which of the following equations represents this situation?
 (a) $X + 7 = 25$ (b) $X - 7 = 11$ (c) $X + 7 = 18$ (d) $X - 7 = 18$
- 3 What is the algebraic expression. equivalent to the following expression $2x - 3 - 4x + 1$?
 (a) $2x - 2$ (b) $-2x + 2$ (c) $-6x - 4$ (d) $-2 - 2x$
- 4 If the angle A and B are complementary , and $m(\angle A) = 40^\circ$ What is the measure of $\angle B$?
 (a) 40° (b) 50° (c) 90° (d) 140°
- 5 Which of the following equations. is equivalent to equation : $2n+1=3$?
 (a) $n + 2 = 6$ (b) $3n = 4$ (c) $2n = 2$ (d) $n + 1 = 6$
- 6 An angle measuring 30° has Supplementary Angles that measures
 (a) 60° (b) 40° (c) 210° (d) 150°
- 7 In the opposite figure :
 $M(\angle ACD) = \dots\dots\dots$
 (a) 60° (b) 40°
 (c) 50° (d) 70°
- 8 The type of angle whose measure is 330°
 (a) Acute (b) Right (c) Reflex (d) obtuse
- 9 The Solution set of equation: $2(x - 4) = 0$ in Q is:
 (a) $\{4\}$ (b) $\{-4\}$ (c) $\{0\}$ (d) $\{8\}$



Question 2 : Answer the following questions :

- ① Write the simplest form, the expression : $2(n - 3m) - 3(2n - 1)$, and then find its value at $m = -2$, $n = 2$
- ② If $\overline{AB}$ is perpendicular to $\overline{AC}$. find the value. Of X in the opposite Figure:
 
- ③ Find three consecutive even numbers their sum is 108.
- ④ In the opposite figure Find the value of x:
 
- ⑤ The length of rectangle is 7 meters. longer than it is wide. If its perimeter is 66 meters, find its dimensions.
- ⑥ An integer is such that if its double is added to 4 , the result is 24 , What is this number?
- ⑦ If : $5n = 20$ find the value of: $8 - 2n$

Exam 2

Question 1 : Choose the correct answer :

- ① If $m(\angle X) = 42^\circ$, what is the measure of (reflex $\angle X$)?

(a) 42°	(b) 48°	(c) 138°	(d) 318°
----------------	----------------	-----------------	-----------------
- ② If $3x = 3$, then $2x - 1 = \dots$

(a) 1	(b) 2	(c) 3	(d) 4
-------	-------	-------	-------
- ③ An angle measuring 30° has a complementary angle that measures $\dots^\circ$

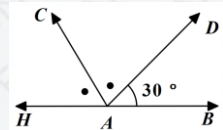
(a) 60	(b) 150	(c) 330	(d) 120
--------	---------	---------	---------
- ④ Which of the following equation has no solution in Z ?

(a) $6x = 24$	(b) $6x = 15$	(c) $6x = 18$	(d) $6x = 12$
---------------	---------------	---------------	---------------

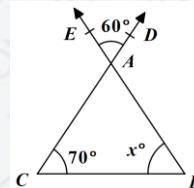
- 5 An angle measuring 50° has Supplementary Angles that measures $^\circ$
 (a) 60 (b) 40 (c) 210 (d) 130
- 6 The solution set in Z for the equation : $6 - 3x = x - 4$ is ...
 (a) $\emptyset$ (b) $\{2\}$ (c) $\{1\}$ (d) $\{3\}$
- 7 The sum of the measures of the angles of the triangle is equal to the measure of ...
 (a) A right angle (b) Straight angle
 (c) An acute angle (d) A reflex angle
- 8 Which of the following angles is a right angle?
 (a) $89^\circ 56'$ (b) $89^\circ 61'$ (c) $89^\circ 60'$ (d) $88^\circ 60'$
- 9 What type of angles does complement a right angle ?
 (a) Acute (b) Obtuse (c) Zero (d) Reflected

Question 2 : Answer the following questions :

- 1 In the opposite figure $\overrightarrow{AC}$ bisects $\angle DAH$, find $m(\angle CAB)$



- 2 In the opposite figure find the value of X



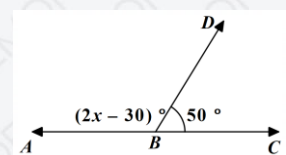
- 3 If the Sum of two expression is : $7X - 3Y + 5Z$ and one of these expression is : $2Y - 3X + Z$

Find the other expression:

- 4 Find the Solution set of $3(X - 5) = -18$ in Q

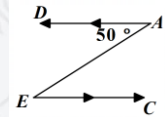
- 5 Three consecutive number their sum is 123 find these numbers in steps

- 6 In the opposite figure: If A , B , C are on the same stright line
 Find the Value of X:



- 7 If $\frac{m}{2} = 9$ find the value of : $m - 15$

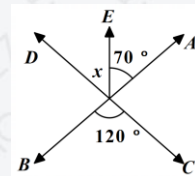
Question 1 : Choose the correct answer :

- ① What is the type of the angle Supplements an acute angle?
 - (a) Acute
 - (b) Obtuse
 - (c) Stright
 - (d) Reflex
- ② Which of the following pairs of terms are like terms?
 - (a) $2X$, $-2X^2$
 - (b) $3a$, $8a$
 - (c) $7X$, 7
 - (d) X^2 , Y^2
- ③ Two Consecutive numbers whose sum is 29 which of the following equation expresses that?
 - (a) $X + X + 2 = 29$
 - (b) $X + X + 1 = 29$
 - (c) $X + X - 1 = 28$
 - (d) $X + X + 1 = 30$
- ④ Which inequality expresses that Ahmed requires a minimum of 10 gigabytes per month to accomplish his work online ?
 - (a) $X < 10$
 - (b) $X > 10$
 - (c) $X \leq 10$
 - (d) $X \geq 10$
- ⑤ Which of the following represents. the solution of the equation $2(X - 5) = 0$ in Q ?
 - (a) 0
 - (b) 5
 - (c) -5
 - (d) 10
- ⑥ What is the measure of the angle that Supplements an angle of measure $34^\circ 60'$?
 - (a) 55°
 - (b) 56°
 - (c) 145°
 - (d) 146°
- ⑦ In the opposite figure $m(\angle AEC) = \dots^\circ$

 - (a) 40
 - (b) 70
 - (c) 60
 - (d) 50
- ⑧ An angle measuring 10° has a Supplementary angle that measures $\dots^\circ$
 - (a) 60°
 - (b) 150°
 - (c) 33°
 - (d) 170°
- ⑨ If a straight line intersects two parallel straight lines, then each two interior angles on the same side of the transversal are
 - (a) Complementary
 - (b) Supplementary
 - (c) Equal in measure
 - (d) Adjacent

Question 2 : Answer the following questions :

- ① Two vertically opposite angles, one of them measures $(2X^\circ)$ and the other measure $(X+21)^\circ$ Find the measure of one of them
- ② Find in Q the solution set of $2(X + 3) = 3(1 - X)$

- 3 The algebraic expression $8x + 3y - 18xy - 6$ Consists of four terms, write :-
- 1- The terms of the expression
 - 2- The constant term
 - 3- The Coefficient of xy
 - 4- The variable whose coefficient is 3
- 4 If $-7K = 28$, then what is the value of $3K + 6$?
- 5 Write the mathematical formula that expresses the total area (A) of a cube, Where one of its faces has an area equal to X^2
- 6 Find the value of $X \overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$
- 7 Find the value of the expression $(4x - 10)$ at $x = -1$.



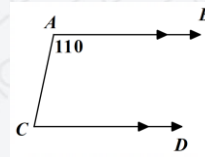
Model (4)

Question 1 : Choose the correct answer :

- 1 The solution set of the equation $3 = X + 5$ in N is ...
- (a) $\{2\}$ (b) $\{-2\}$ (c) $\{0\}$ (d) $\emptyset$
- 2 Farida's age now is X years and her age 6 years ago Was 15 years which of the following equation represent the previous situation ?
- (a) $X - 6 = 15$ (b) $X + 6 = 15$ (c) $X + 6 = 21$ (d) $X - 6 = 9$
- 3 The type of the angle whose measure is 240 ...
- (a) Acute (b) Right (c) Reflex (d) Obtuse
- 4 What is the algebraic expression equivalent to the following expression $2X - 3 + 4X - 1$?
- (a) $2X - 2$ (b) $-2X + 2$ (c) $-6X - 4$ (d) $-4 + 6X$
- 5 If the angle A and B are Complementary, and $m(\angle A) = 30^\circ$, what is the measure of $\angle B$?
- (a) 40° (b) 60° (c) 90° (d) 140°

6 In the opposite figure $m(\angle ACD) = \dots^\circ$

- (a) 60 (b) 70
(c) 80 (d) 90



7 The two angles are two angles that lie in the same plane, have a Common Vertex and a common side

- (a) alternate angles (b) vertically opposite angles
(c) Adjacent angles (d) congruent angle

8 If the ratio between the measures of two complementary angles is 2:3 then the measure of the greater angle is

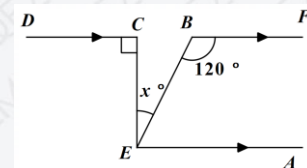
- (a) 45° (b) 90° (c) 54° (d) 36°

9 If a straight line intersects two Parallel straight lines then each two alternating angles are ...

- (a) Supplementary (b) Complementary
(c) equal in measure (d) adjacent

Question 2 : Answer the following questions :

1 Find X in the opposite figure



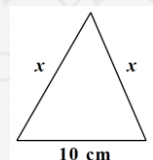
2 Find the Solution Set of the equation $3x - 6 = 18$ if the Substitutions set is $\{6,7,8\}$

3 Find the difference $4X - 5y + 7$ from $7X + 3y + 2$

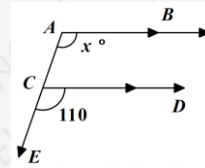
4 Put the following expression:
 $2xy + 3x - 2y + 5x$ in its simplest form, then find its value if $X = -1$ and $y = 2$

5 If the perimeter of the opposite triangle equals 34 then what is the Value X ?

6 Find the result of adding
 $-15X$ and $12X$



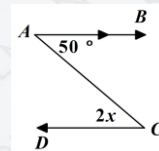
7 Find the value of X in The opposite figure



Model (5)

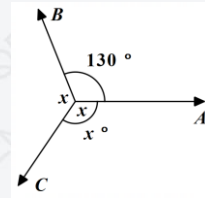
Question 1 : Choose the correct answer :

- 1 The Coefficient of the algebraic term x^2 is ...
 - a 0
 - b 1
 - c 2
 - d 3
- 2 If $m(\angle A) = 70^\circ$, $\angle A$ is complements $\angle B$. then the measurement of $\angle B = \dots$
 - a 20°
 - b 70°
 - c 110°
 - d 290°
- 3 How many terms are there in the expression: $abc-8$?
 - a 1
 - b 2
 - c 3
 - d 4
- 4 If $m(\angle A)=105^\circ$, Then $m(\text{Reflex } \angle A)$.
 - a 255°
 - b 105°
 - c 75°
 - d 360°
- 5 A rectangle has a perimeter 24 cm , if its length is m cm Then its width is ...cm
 - a $m - 12$
 - b $12 - m$
 - c $12 + m$
 - d $12 m$
- 6 If the angle of $(2x + 10)^\circ$ is vertically opposite angle to an angle of measure 80° , then $X = \dots$
 - a 40°
 - b 35°
 - c 25°
 - d 45°
- 7 Which is the inequality representing the set of integers less than or equal to 3 ?
 - a $X < 3$
 - b $X \leq 3$
 - c $X > 3$
 - d $X \geq 3$
- 8 In the opposite figure $m(\angle A) 50^\circ$, $\overline{AB} \parallel \overline{DC}$ Then $X = \dots^\circ$
 - a 40
 - b 25
 - c 100
 - d 50
- 9 What type of angles supplements a zero angle ?
 - a Acute
 - b Obtuse
 - c Straight
 - d Right



Question 2 : Answer the following questions :

- ① In the opposite figure find the value of : X



- ② Write the decrease of the expression $X + 2y - 3Z$ than the expression $3y - 3Z + 10X$?

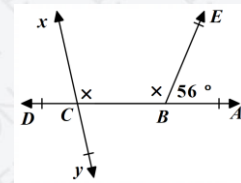
- ③ In the opposite figure A, B, C and D are on Straight line

$$\overrightarrow{XY} \cap \overrightarrow{BD} = \{C\},$$

$$m(\angle ABE) = 56^\circ$$

$$m(\angle FBC) = m(\angle BCX)$$

$$\text{Find: } m(\angle DCY)$$



- ④ Find the S.S of each of the following :

A) $-2(x + 1) = 3$

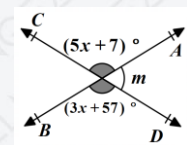
B) $3(x - 2) = 5x - 10$

- ⑤ Add: $2x + 3y - 5$ and $x - y + 8$

- ⑥ Find the simplest form :

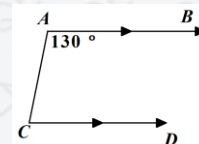
$$\frac{4}{14} \div \left(\left| \frac{-1}{7} \right| + \frac{9}{7} \right)$$

- ⑦ Find the Value of X in the opposite figure $\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$



Question 1 : Choose the correct answer :

- ① Which is the suitable equation to find the side length of an equilateral triangle whose perimeter is 12 cm ?
 (a) $x + 3 = 12$ (b) $3x = 12$ (c) $2x = 12$ (d) $x = 12$
- ② Hazm is x years old now seven years ago he was 18 years old. Which of the following equations represents this situation?
 (a) $X + 7 = 25$ (b) $X - 7 = 11$ (c) $X + 7 = 18$ (d) $X - 7 = 18$
- ③ What is the algebraic expression. equivalent to the following expression $2x - 3 - 4x + 1$?
 (a) $2x - 2$ (b) $-2x + 2$ (c) $-6x - 4$ (d) $-2 - 2x$
- ④ If the angle A and B are complementary , and $m(\angle A) = 40^\circ$ What is the measure of $\angle B$?
 (a) 40° (b) 50° (c) 90° (d) 140°
- ⑤ Which of the following equations. is equivalent to equation : $2n+1=3$?
 (a) $n + 2 = 6$ (b) $3n = 4$ (c) $2n = 2$ (d) $n + 1 = 6$
- ⑥ An angle measuring 30° has Supplementary Angles that measures
 (a) 60° (b) 40° (c) 210° (d) 150°
- ⑦ In the opposite figure :
 $M(\angle ACD) = \dots\dots\dots$
 (a) 60° (b) 40°
 (c) 50° (d) 70°
- ⑧ The type of angle whose measure is 330°
 (a) Acute (b) Right (c) Reflex (d) obtuse
- ⑨ The Solution set of equation: $2(x - 4) = 0$ in Q is:
 (a) $\{4\}$ (b) $\{-4\}$ (c) $\{0\}$ (d) $\{8\}$



Question 2 : Answer the following questions :

- ① Write the simplest form, the expression : $2(n - 3m) - 3(2n - 1)$, and then find its value at $m = -2$, $n = 2$

Solution :

$$\begin{aligned} & 2(n - 3m) - 3(2n - 1) \\ &= 2n - 6m - 6n - 3 \\ &= -4n - 6m - 3 \end{aligned}$$

$$\text{When } m = -2, n = 2$$

$$\begin{aligned} & \text{Then } -4(2) - 6(-2) - 3 \\ &= -8 + 12 - 3 \\ &= -11 + 12 = 1 \end{aligned}$$

- ② If $\overrightarrow{AB}$ is perpendicular to $\overrightarrow{AC}$, find the value of X in the opposite Figure:

Solution :

$$\overrightarrow{AB} \perp \overrightarrow{AC} \text{ then } m(\angle CAB) = 90^\circ$$

$$m(\angle CAD) + m(\angle DAB) = 90^\circ$$

$$(4x + 7) + 55^\circ = 90^\circ$$

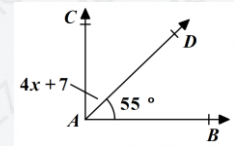
$$4x + 62^\circ = 90^\circ$$

$$4x = 90^\circ - 62^\circ$$

$$4x = 28^\circ$$

$$X = \frac{28}{4}$$

$$X = 7^\circ$$



- ③ Find three consecutive even numbers their sum is 108.

Solution:

let the numbers be X, X+2 and X+4

$$X + X + 2 + x + 4 = 108$$

$$3x + 6 = 108$$

$$3x = 108 - 6 = 102$$

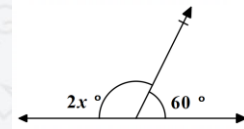
$$X = 102 \div 3 = 34$$

The numbers are 34, 36 and 38

4

In the opposite figure Find the value of x:

Solution :



$$(2x)^\circ + 60^\circ = 180^\circ$$

$$2x = 180^\circ - 60^\circ$$

$$2x = 120^\circ$$

$$x = 120 \div 2 = 60^\circ$$

5

The length of rectangle is 7 meters. longer than it is wide. If its perimeter is 66 meters, find its dimensions.

Solution:-

let the length of rectangle = X meter and the width = (x - 7) meter

The perimeter of rectangle = 2 (L + w) then P = 2(X + X - 7) = 66 meter

$$P = 2x + 2x - 14 = 66m$$

$$4x - 14 = 66m$$

$$4x = 66 + 14$$

$$4x = 80$$

$$x = 80 \div 4 = 20$$

$$\text{Then } x = 20, x - 7 = 20 - 7 = 13$$

The length = 20 meter

The width = 13 meter

6

An integer is such that if its double is added to 4 , the result is 24 , What is this number?

Solution:-

$$2x + 4 = 24$$

The number is

$$2x = 24 - 4, 2x = 20$$

$$X = 20 \div 2 = 10$$

7

If : $5n = 20$ find the value of: $8 - 2n$

Solution:-

$$5n = 20$$

$$n = 20 \div 5 = 4$$

$$n = 4$$

$$\text{Then } \rightarrow 8 - 2(4) = 8 - 8 = 0$$

Question 1 : Choose the correct answer :

- ① If $m(\angle X) = 42^\circ$, what is the measure of (reflex $\angle X$)?
 - (a) 42°
 - (b) 48°
 - (c) 138°
 - (d) 318°
- ② If $3x = 3$, then $2x - 1 = \dots$
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
- ③ An angle measuring 30° has a complementary angle that measures $\dots^\circ$
 - (a) 60
 - (b) 150
 - (c) 330
 - (d) 120
- ④ Which of the following equation has no solution in Z ?
 - (a) $6x = 24$
 - (b) $6x = 15$
 - (c) $6x = 18$
 - (d) $6x = 12$
- ⑤ An angle measuring 50° has Supplementary Angles that measures $\dots^\circ$
 - (a) 60
 - (b) 40
 - (c) 210
 - (d) 130
- ⑥ The solution set in Z for the equation : $6 - 3x = x - 4$ is ...
 - (a) $\emptyset$
 - (b) $\{2\}$
 - (c) $\{1\}$
 - (d) $\{3\}$
- ⑦ The sum of the measures of the angles of the triangle is equal to the measure of ...
 - (a) A right angle
 - (b) Straight angle
 - (c) An acute angle
 - (d) A reflex angle
- ⑧ Which of the following angles is a right angle?
 - (a) $89^\circ 56'$
 - (b) $89^\circ 61'$
 - (c) $89^\circ 60'$
 - (d) $88^\circ 60'$
- ⑨ What type of angles does complement a right angle ?
 - (a) Acute
 - (b) Obtuse
 - (c) Zero
 - (d) Reflected

Question 2 : Answer the following questions :

- ① In the opposite figure $\overrightarrow{AC}$ bisects $\angle DAH$, find $m(\angle CAB)$

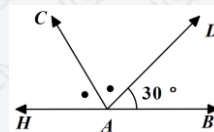
Solution :

$$m(\angle DAH) = 180^\circ - 30^\circ$$

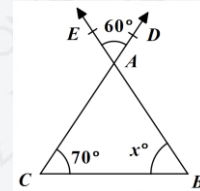
$$m(\angle DAH) = 150^\circ$$

$$m(\angle CAD) = 150^\circ \div 2 = 75^\circ$$

$$m(\angle CAB) = 75^\circ + 30^\circ = 105^\circ$$



2 In the opposite figure find the value of X



Solution :

$$m(\angle EAD) = m(\angle CAB) = 60^\circ \text{ (V.O.A)}$$

∴ The sum of the measure of the interior angles of any triangle = 180°

∴ In $\triangle ABC$

$$m(\angle ACB) + m(\angle CBA) + m(\angle BAC) = 180^\circ$$

$$70^\circ + X + 60^\circ = 180^\circ$$

$$X + 0 = 180^\circ$$

$$X = 180^\circ - 130^\circ$$

$$X = 50^\circ$$

3 If the Sum of two expression is : $7X - 3Y + 5Z$ and one of these expression is : $2Y - 3X + Z$

Find the other expression:

Solution :

$$(7X - 3Y + 5Z) - (2Y - 3X + Z)$$

$$= 7X + 3X - 3Y - 2Y + 5Z - Z$$

$$= 10X - 5Y + 4Z$$

The other expression is : $10X - 5Y + 4Z$

4 Find the Solution set of $3(X - 5) = -18$ in Q

Solution :

$$3(X - 5) = -18$$

$$X - 5 = \frac{-18}{3}$$

$$X - 5 = -6$$

$$X = -6 + 5 = -1$$

The Solution set = $\{-1\}$

5 Three consecutive number their sum is 123 find these numbers in steps

Solution :-

Let the numbers be :

$$X, X + 1, X + 2$$

$$X + X + 1 + X + 2 = 123$$

$$3X = 123 - 3 = 120$$

$$X = 120 \div 3 = 40$$

The numbers are 40 , 41 , 42

- 6 In the opposite figure: If A , B , C are on the same stright line
Find the Value of X:

Solution :

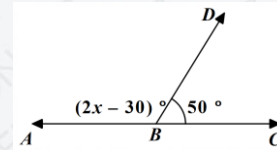
∴ A , B , C are on the same stright line

$$\therefore (2x - 30^\circ) + 50^\circ = 180^\circ$$

$$\therefore 2X + 20^\circ = 180^\circ$$

$$\therefore 2X = 180^\circ - 120^\circ = 160^\circ$$

$$\therefore X = 160^\circ \div 2 = 80^\circ$$



- 7 If $\frac{m}{2} = 9$ find the value of : $m - 15$

Solution :

$$\frac{m}{2} = 9$$

$$M = 2 \times 9 = 18$$

$$M - 15 =$$

$$18 - 15 = 3$$

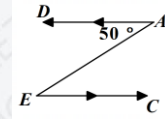
Exam 3

Question 1 : Choose the correct answer :

- 1 What is the type of the angle Supplements an acute angle?
 - (a) Acute
 - (b) **Obtuse**
 - (c) Stright
 - (d) Reflex
- 2 Which of the following pairs of terms are like terms?
 - (a) $2X, -2X^2$
 - (b) **$3a, 8a$**
 - (c) $7X, 7$
 - (d) X^2, Y^2
- 3 Two Consecutive numbers whose sum is 29 which of the following equation expresses that?
 - (a) $X + X + 2 = 29$
 - (b) **$X + X + 1 = 29$**
 - (c) $X + X - 1 = 28$
 - (d) $X + X + 1 = 30$
- 4 Which inequality expresses that Ahmed requires a minimum of 10 gigabytes per month to accomplish his work online ?
 - (a) $X < 10$
 - (b) $X > 10$
 - (c) $X \leq 10$
 - (d) **$X \geq 10$**
- 5 Which of the following represents. the solution of the equation $2(X - 5) = 0$ in Q ?
 - (a) 0
 - (b) **5**
 - (c) -5
 - (d) 10

- 6 What is the measure of the angle that Supplements an angle of measure $34^\circ 60'$?
- (a) 55° (b) 56° (c) 145° (d) 146°

- 7 In the opposite figure $m(\angle AEC) = \dots^\circ$



- (a) 40 (b) 70 (c) 60 (d) 50
- 8 An angle measuring 10° has a Supplementary angle that measures ... $^\circ$
- (a) 60° (b) 150° (c) 33° (d) 170°

- 9 If a straight line intersects two parallel straight lines, then each two interior angles on the same side of the transversal are

- (a) Complementary (b) Supplementary (c) Equal in measure (d) Adjacent

Question 2 : Answer the following questions :

- 1 Two vertically opposite angles, one of them measures $(2X^\circ)$ and the other measure $(X+21)^\circ$ Find the measure of one of them

Solution:-

$\therefore$ Any two vertically opposite angles. (V.o.A) are equal in measure

$$\therefore (2X)^\circ = (X + 21)^\circ$$

$$2X - X = 21$$

$$X = 21$$

- 2 Find in Q the solution set of $2(X + 3) = 3(1 - X)$

Solution:-

$$2X + 6 = 3 - 3X$$

$$2X + 3X = 3 - 6$$

$$5X = -3$$

$$X = \frac{-3}{5} \in Q$$

$$\text{then the S.S} = \left\{ \frac{-3}{5} \right\}$$

3 The algebraic expression $8x + 3y - 18xy - 6$ Consists of four terms, write :-

- 5- The terms of the expression
- 6- The constant term
- 7- The Coefficient of Xy
- 8- The variable whose coefficient is 3

Solution:-

- 1- The terms are $8X$, $3Y$, $18XY$ and -6
- 2- The constant is -6
- 3- The coefficient of Xy is -18
- 4- The variable whose coefficient is 3 is y

4 If $-7K = 28$, then what is the value of $3K + 6$?

Solution:-

$$\therefore -7k = 28 \rightarrow K = -\frac{28}{7} = -4$$

$$\begin{aligned} &\Rightarrow 3K + 6 \\ &= 3(-4) + 6 \\ &= -12 + 6 = -6 \end{aligned}$$

5 Write the mathematical formula that expresses the total area (A) of a cube, Where one of its faces has an area equal to X^2

Solution :-

Total Area of cube = Area of one face $\times 6$

The expression is:

$$A = 6X^2$$

6 Find the value of X $\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$

Solution:-

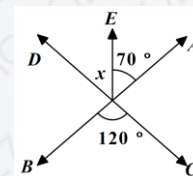
$$m(\angle BMC) = m(\angle AMD) = 120^\circ \text{ (V.O.A)}$$

$$\therefore m(\angle AME) + m(\angle EMD) = 120^\circ$$

$$70^\circ + X = 120^\circ$$

$$X = 120^\circ - 70^\circ$$

$$X = 50^\circ$$



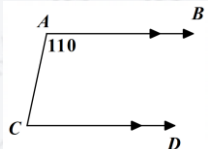
7 Find the value of the expression $(4x - 10)$ at $x = -1$.

Solution:-

$$\begin{aligned} 4x - 10 &= 4(-1) - 10 \\ &= -4 - 10 = -14 \\ &= (4x - 10) = -14 \end{aligned}$$

Model (4)

Question 1 : Choose the correct answer :

- ① The solution set of the equation $3 = X + 5$ in N is ...
 - (a) $\{2\}$
 - (b) $\{-2\}$
 - (c) $\{0\}$
 - (d) $\emptyset$
- ② Farida's age now is X years and her age 6 years ago Was 15 years which of the following equation represent the previous situation ?
 - (a) $X - 6 = 15$
 - (b) $X + 6 = 15$
 - (c) $X + 6 = 21$
 - (d) $X - 6 = 9$
- ③ The type of the angle whose measure is 240° ...
 - (a) Acute
 - (b) Right
 - (c) Reflex
 - (d) Obtuse
- ④ What is the algebraic expression equivalent to the following expression $2X - 3 + 4X - 1$?
 - (a) $2X - 2$
 - (b) $-2X + 2$
 - (c) $-6X - 4$
 - (d) $-4 + 6X$
- ⑤ If the angle A and B are Complementary, and $m(\angle A) = 30^\circ$, what is the measure of $\angle B$?
 - (a) 40°
 - (b) 60°
 - (c) 90°
 - (d) 140°
- ⑥ In the opposite figure $m(\angle ACD) = \dots^\circ$

 - (a) 60
 - (b) 70
 - (c) 80
 - (d) 90
- ⑦ The two angles are two angles that lie in the same plane, have a Common Vertex and a common side
 - (a) alternate angles
 - (b) vertically opposite angles
 - (c) Adjacent angles
 - (d) congruent angle
- ⑧ If the ratio between the measures of two complementary angles is 2:3 then the measure of the greater angle is
 - (a) 45°
 - (b) 90°
 - (c) 54°
 - (d) 36°
- ⑨ If a straight lines intersects two Parallel straight lines then each two alternating angles are ...
 - (a) Supplementary
 - (b) Complementary
 - (c) equal in measure
 - (d) adjacent

Question 2 : Answer the following questions :

1

Find X in the opposite figure

Solution:-

$$\therefore \overrightarrow{BE} \parallel \overrightarrow{EA}$$

BE is transversal

$$\therefore m(\angle FBE) + m(\angle BEA) = 180^\circ$$

The interior angles on the same side of transversal

$$\therefore m(\angle FBE) = 120^\circ$$

$$\therefore m(\angle BEA) = 180^\circ - 120^\circ = 60^\circ$$

$$\therefore \overrightarrow{DC} \parallel \overrightarrow{EA}, \text{ CE is transversal}$$

$$m(\angle DCE) = m(\angle CEA) = 90^\circ$$

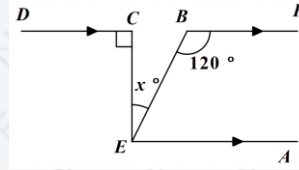
The alternating interior angles are equal

$$m(\angle CEA) = m(\angle AEB) + m(\angle BEC)$$

$$90 = 60^\circ + m(\angle BEC)$$

$$\therefore m(\angle BEC) = 90^\circ - 60^\circ$$

$$m(\angle BEC) = X = 30^\circ$$



2

Find the Solution Set of the equation $3x - 6 = 18$

if the Substitutions set is $\{6,7,8\}$

Solution:-

When $X = 6$

$$3(6) - 6 = 3 \times 6 - 6$$

$$= 18 - 6 = 12 \neq 18$$

When $X = 8$

$$3(8) - 6 = 3 \times 8 - 6 = 24 - 6 = 18$$

the Solution Set $= \{8\}$

3

Find the difference $4X - 5y + 7$ from

$$7X + 3y + 2$$

Solution:-

$$(7X + 3Y + 2) - (4x - 5Y + 7)$$

$$= 7x - 4x + 3Y + 5Y + 2 - 7$$

$$= 3X + 8Y - 5$$

4

Put the following expression:

$2xy + 3x - 2y + 5x$ in its simplest form, then find its value if $X = -1$ and $y = 2$

Solution:-

$$2xy + 3x + 5x - 2y$$

$$= 2xy + 8x - 2y$$

$$\text{When } X = -1, y = 2$$

$$\rightarrow 2(-1)(2) + 3(-1) + 5(-1) - 2(2)$$

$$= 2x - 1x2 + 8x - 1 - 2x2$$

$$= -4 - 8 - 4$$

$$= -16$$

5

If the perimeter of the opposite triangle equals 34 then what is the Value X ?

Solution:-

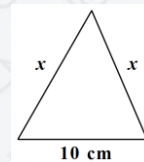
$$\text{Perimeter} = X + X + 10$$

$$34 = 2X + 10$$

$$\Rightarrow 2x = 34 - 10$$

$$2X = 24$$

$$X = 24 \div 2 = 12 \text{ cm}$$



6

Find the result of adding

$-15X$ and $12X$

Soulation:-

$$-15X + 12X = -3X$$

7

Find the value of X in The opposite figure

Solution:-

$$\because \overrightarrow{AB} \parallel \overrightarrow{CD}, \text{ AE is Transversal}$$

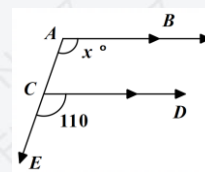
$$\because m(\angle BAC) = m(\angle DCE)$$

And they are Corresponding

$$\because m(\angle DCE) = 110^\circ$$

$$\because m(\angle CAB) = 110^\circ$$

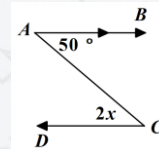
$$X = 110^\circ$$



Model (5)

Question 1 : Choose the correct answer :

- 1 The Coefficient of the algebraic term x^2 is ...
 (a) 0 (b) 1 (c) 2 (d) 3
- 2 If $m(\angle A) = 70^\circ$, $\angle A$ is complements $\angle B$. then the measurement of $\angle B = \dots$
 (a) 20° (b) 70° (c) 110° (d) 290°
- 3 How many terms are there in the expression: $abc-8$?
 (a) 1 (b) 2 (c) 3 (d) 4
- 4 If $m(\angle A)=105^\circ$, Then $m(\text{Reflex } \angle A)$.
 (a) 255° (b) 105° (c) 75° (d) 360°
- 5 A rectangle has a perimeter 24 cm , if its length is m cm Then its width is ...cm
 (a) $m - 12$ (b) $12 - m$ (c) $12 + m$ (d) 12 m
- 6 If the angle of $(2x + 10)^\circ$ is vertically opposite angle to an angle of measure 80° , then $X = \dots$
 (a) 40° (b) 35° (c) 25° (d) 45°
- 7 Which is the inequality representing the set of integers less than or equal to 3 ?
 (a) $X < 3$ (b) $X \leq 3$ (c) $X > 3$ (d) $X \geq 3$
- 8 In the opposite figure $m(\angle A) 50^\circ$, $\overline{AB} \parallel \overline{DC}$ Then $X = \dots^\circ$
 (a) 40 (b) 25 (c) 100 (d) 50
- 9 What type of angles supplements a zero angle ?
 (a) Acute (b) Obtuse (c) Straight (d) Right



Question 2 : Answer the following questions :

- ① In the opposite figure find the value of : X

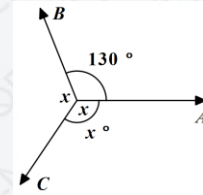
Solution:-

$$X + X + 130 = 360^\circ$$

$$2X + 130 = 360^\circ$$

$$2X = 360 - 130 = 230^\circ$$

$$X = 230 \div 2 = 115^\circ$$



- ② Write the decrease of the expression $X + 2y - 3Z$ than the expression $3y - 3Z + 10X$?

Solution :-

$$(3y - 3Z + 10X) - (x + 2y - 3Z)$$

$$= 10X + 3y - 3Z - 2y + 3Z - x$$

$$= 9X + y$$

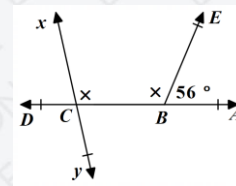
- ③ In the opposite figure A, B, C and D are on Straight line

$$\overrightarrow{XY} \cap \overrightarrow{BD} = \{C\},$$

$$m(\angle ABE) = 56^\circ$$

$$m(\angle FBC) = m(\angle BCX)$$

$$\text{Find: } m(\angle DCY)$$



Solution:-

$$m(\angle EBC) = 180^\circ - 56^\circ = 124^\circ$$

$$m(\angle EBC) = m(\angle x CB) = 124^\circ$$

$$m(\angle DCY) = m(\angle XCB) \quad (\text{V.O.A})$$

$$m(\angle DCY) = 124^\circ$$

- ④ Find the S.S of each of the following :

$$\text{A) } -2(x + 1) = 3$$

Solution:-

$$-2x - 2 = 3$$

$$-2x = 3 + 2$$

$$-2x = 5$$

$$x = -\frac{5}{2} \notin N, S.S = \emptyset$$

B) $3(x - 2) = 5x - 10$

Solution:-

$$3x - 6 = 5x - 10$$

$$3x - 5x = 6 - 10$$

$$-2x = -4$$

$$-x = \frac{-4}{2}$$

$$x = 2$$

$$S.S = \{2\}$$

5

Add: $2x+3y -5$ and $x - y +8$

Solution:-

$$(2x + 3y - 5) + (x - y + 8)$$

$$2x + x + 3y - y - 5 + 8$$

$$= 3x + 2y + 3$$

6

Find the simplest form :

$$\frac{4}{14} \div \left(\left| \frac{-1}{7} \right| + \frac{9}{7} \right)$$

Solution:-

$$\frac{4}{14} \div \left(\frac{1}{7} + \frac{9}{7} \right)$$

$$= \frac{4}{14} \div \frac{10}{7}$$

$$= \frac{4}{14} \times \frac{7}{10}$$

$$= \frac{1}{5}$$

7

Find the Value of X in the opposite figure $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$

Solution:-

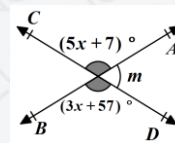
$$5x + 7 = 3x + 57 \quad (\text{V.O.A})$$

$$5x - 3x = 57 - 7$$

$$2x = 50$$

$$x = 50 \div 2$$

$$x = 25$$



حمل الآن

مجاناً وحصرياً

المراجعة رقم (7)

اختبار شهر نوفمبر



First / Choose the correct answer :-

- 1) The value of X in the equation $(4x + 2) = (3x - 1)$ is.....
- (a) -3 (b) 7 (c) 3 (d) -7
- 2) A parallelogram whose diagonals are perpendicular is called
- (a) Square (b) Rhombus (c) Rectangle (d) Trapezium
- 3) The type of angle whose measure is 330°
- (a) Acute (b) Right (c) Reflex (d) Obtuse
- 4) The solution set of the equation: $3 = x + 5$ in N is.....
- (a) {2} (b) { -2 } (c) { 0 } (d) $\emptyset$
- 5) If the sum of the measures of two angles in a triangle is 130° , what is the measure of the third angle?
- (a) 20° (b) 30° (c) 50° (d) 60°
- 6) If: ABCD is a parallelogram, $\overline{AC} = \overline{BD}$, , $\overline{AC} \perp \overline{BD}$, then the shape ABCD is
- (a) Square (b) Rectangle (c) Rhombus (d) Trapezium
- 7) The angle whose measure is 70° is vertically opposite by an angle whose measure is
- (a) 110° (b) 20° (c) 70° (d) 90°
- 8) The sum of measures of the interior angles of a quadrilateral is equal to ...
- (a) 180° (b) 360° (c) 540° (d) 720°
- 9) If the two vertical angles are complementary, then the measure of each of them is
- (a) 180° (b) 50° (c) 45° (d) 90°

10) If a straight line intersects two parallel straight lines, then each two interior angles on the same side of the transversal are

- (a) Complementary (b) Supplementary
(c) Equal in measure (d) Adjacent

11) If: ABCD is a square, Then $m(\angle ABD) = \dots\dots\dots$

- (a) 60° (b) 120° (c) 90° (d) 45°

12) Karma's age now is X years and her age 6 years ago was 15 years. Which of the following equations represents the previous situation?

- (a) $X - 6 = 15$ (b) $X + 6 = 15$ (c) $X + 6 = 21$ (d) $X - 6 = 9$

13) Which of the following sets has quadrilaterals whose sides are all equal in length?

- (a) { Square, rectangle } (b) { Rectangle, rhombus }
(c) { Square, rhombus } (d) { Parallelogram, rhombus }

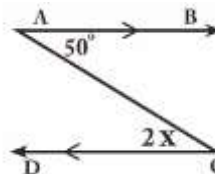
14) The sum of the lengths of any two sides of a triangle is The length of the third side.

- (a) is equal to (b) is greater than
(c) is half of (d) is less than

15) In the opposite figure:

if $m(\angle A) = 50^\circ$ $\overrightarrow{AB} \parallel \overrightarrow{DC}$,

Then, $X = \dots\dots\dots^\circ$



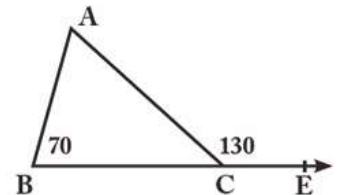
- (a) 40 (b) 25 (c) 100 (d) 50

Second / Answer the following :-

1) Find the solution set of the equation: $5x + 14 = 10$ if the substitution set is (a) Z (b) N

2) Find in Q the solution set of the equation: $2x + 5 = 12 + 3x$

3) In the opposite figure: ABC is a triangle, $m(\angle B) = 70^\circ$, $m(\angle ACE) = 130^\circ$ Find $m(\angle A)$.

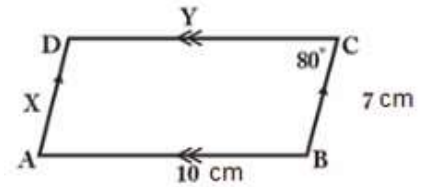


In each of the following find the value of X

(4) 	(5)
(6) 	(7)
(8) 	(9)

10) In the opposite figure ABCD is a parallelogram

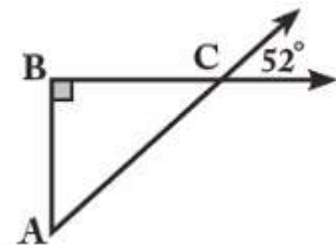
Find: $X + Y$, $m(\angle B)$



11) If the lengths of two sides of a triangle are 3 cm and 5 cm, what is the largest integer that can represent the length of the third side?

12) A father's age is now three times the age of his son ,The father's age was 28 years older than his son , How old are each of them now?

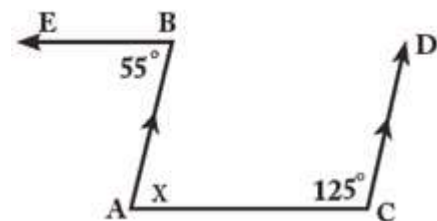
13) In the opposite figure: Find: $m(\angle A)$



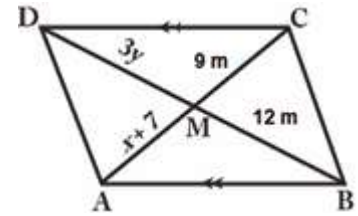
14) In the opposite figure:

1. Find X

2. prove that $\overline{AC} \parallel \overline{BE}$,



15) In the opposite figure: Find with proof the value of: x and y .



16) A triangle has two angles measuring: 36° , 24° . What type of triangle is it according to its angles?

17) If: $2X + 5 = 13$, What is the value of: $X - 3$?

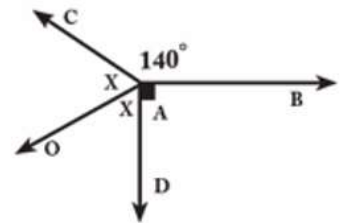
18) Two vertically opposite angles, one of them measures $(2x^\circ)$ and the other measures $(x + 21^\circ)$. Find the measure of one of them.

19) If ABCD is a parallelogram, $m(\angle B) = 3X+10$, $m(\angle D) = 2X+50$, Find $m(\angle C)$ 20) Find in Z the solution set of the following equation: $5X+2 = 3X+8$

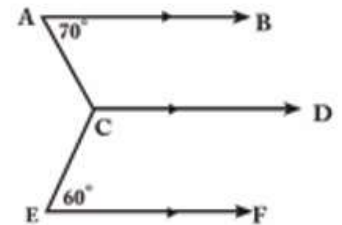
21) Find in $\mathbb{Q}$ the solution set of the following equation: $2(x + 3) = 3(1 - x)$

22) Express the following situation with a suitable equation: the sum of two consecutive odd numbers is 87

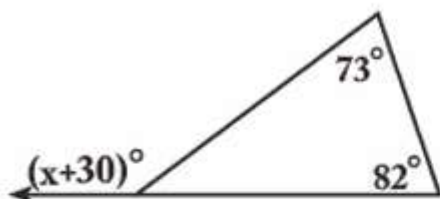
23) In the opposite figure: Find X .



24) In the opposite figure: Find with proof $m(\angle ACE)$

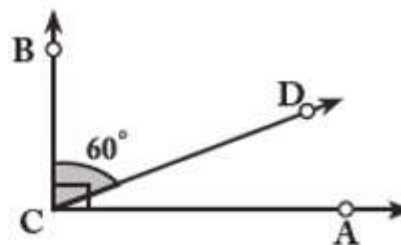


25) In the opposite figure:



Find the value of : x

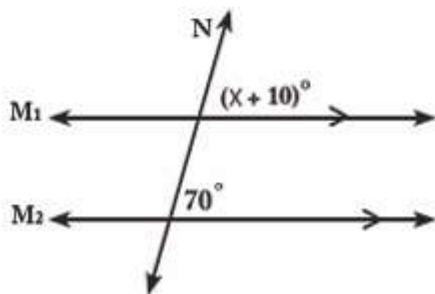
26) In the opposite figure:



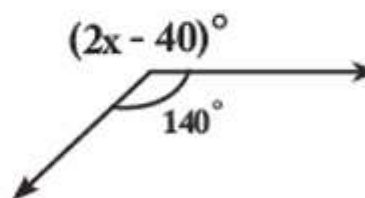
Find: $m(\angle ACD)$

27) In the opposite figure:

The two lines M_1 and M_2 are parallel, The line N is a transversal, Find the value of x .



28) In the opposite figure:



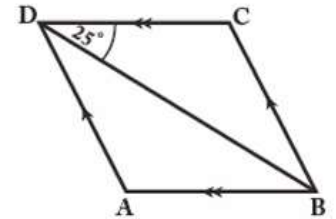
Find the value of : x

29) Which of the following sets of numbers cannot be used as side lengths of a triangle? And why?

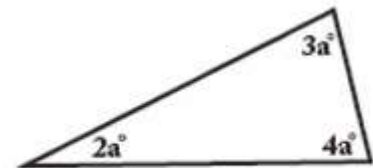
- a) 4 cm, 7 cm, 3 cm
- b) 4 cm, 3 cm, 5 cm
- c) 5 cm, 5 cm, 5 cm

30) If the sum of the measures of two angles in a triangle is 145° what is the measure of the third angle?

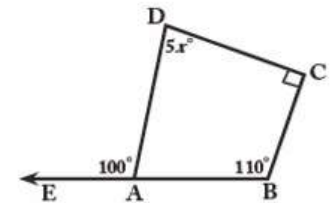
31) In the opposite figure: ABCD is a rhombus. Find with proof: $m(\angle A)$.



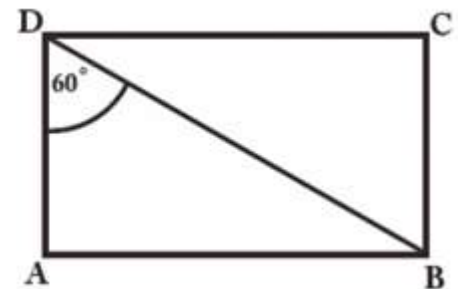
32) In the opposite figure: Find the value of a .



33) In the opposite figure: Find the value of x .



34) In the opposite figure: ABCD is a rectangle. $m(\angle ADB) = 60^\circ$ Find with proof: $m(\angle ABD)$.



35) A triangle has side lengths x cm, x cm, and 10 cm. Find the value of x if the perimeter of triangle is 36 cm.



Answers**First / Choose the correct answer :-**

- 1) The value of X in the equation $(4x + 2) = (3x - 1)$ is.....
(a) **-3** (b) 7 (c) 3 (d) -7
- 2) A parallelogram whose diagonals are perpendicular is called
(a) Square (b) **Rhombus** (c) Rectangle (d) Trapezium
- 3) The type of angle whose measure is 330°
(a) Acute (b) Right (c) **Reflex** (d) Obtuse
- 4) The solution set of the equation: $3 = x + 5$ in N is.....
(a) {2} (b) { -2 } (c) { 0 } (d) **$\emptyset$**
- 5) If the sum of the measures of two angles in a triangle is 130° , what is the measure of the third angle?
(a) 20° (b) 30° (c) **50°** (d) 60°
- 6) If: ABCD is a parallelogram, $\overline{AC} = \overline{BD}$, $\overline{AC} \perp \overline{BD}$, then the shape ABCD is
(a) **Square** (b) Rectangle (c) Rhombus (d) Trapezium
- 7) The angle whose measure is 70° is vertically opposite by an angle whose measure is
(a) 110° (b) 20° (c) **70°** (d) 90°
- 8) The sum of measures of the interior angles of a quadrilateral is equal to ...
(a) **180°** (b) 360° (c) 540° (d) 720°
- 9) If the two vertical angles are complementary, then the measure of each of them is
(a) 180° (b) 50° (c) **45°** (d) 90°

10) If a straight line intersects two parallel straight lines, then each two interior angles on the same side of the transversal are

(a) Complementary

(b) Supplementary

(c) Equal in measure

(d) Adjacent

11) If: ABCD is a square, Then $m(\angle ABD) = \dots\dots\dots$

(a) 60°

(b) 120°

(c) 90°

(d) 45°

12) Karma's age now is X years and her age 6 years ago was 15 years. Which of the following equations represents the previous situation?

(a) $X - 6 = 15$

(b) $X + 6 = 15$

(c) $X + 6 = 21$

(d) $X - 6 = 9$

13) Which of the following sets has quadrilaterals whose sides are all equal in length?

(a) { Square, rectangle }

(b) { Rectangle, rhombus }

(c) { Square, rhombus }

(d) { Parallelogram, rhombus }

14) The sum of the lengths of any two sides of a triangle is The length of the third side.

(a) is equal to

(b) is greater than

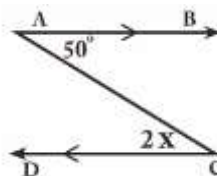
(c) is half of

(d) is less than

15) In the opposite figure:

if $m(\angle A) = 50^\circ$ $\overline{AB} \parallel \overline{DC}$,

Then, $X = \dots\dots\dots^\circ$



(a) 40

(b) 25

(c) 100

(d) 50

Second / Answer the following :-

1) Find the solution set of the equation: $5x + 14 = 10$ if the substitution set is (a) $Z = \emptyset$ (b) $N = \emptyset$

$$5x = 10 - 14 = -4$$

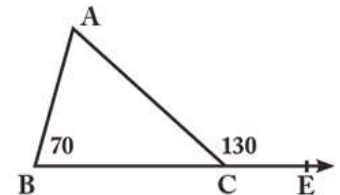
$$x = -4 \div 5 = \frac{-4}{5}$$

2) Find in Q the solution set of the equation: $2x + 5 = 12 + 3x$

$$2x - 3x = 12 - 5$$

$$-x = 7 \quad x = -7 \quad S.S = \{-7\}$$

3) In the opposite figure: ABC is a triangle, $m(\angle B) = 70^\circ$, $m(\angle ACE) = 130^\circ$ Find $m(\angle A)$. 60°

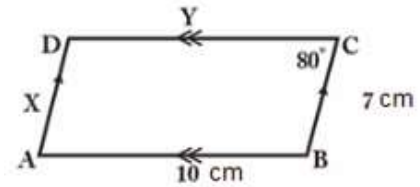


In each of the following find the value of X

(4)	(5)
(6)	(7)
(8)	(9)

10) In the opposite figure ABCD is a parallelogram

Find: $X + Y = 17$, $m(\angle B) = 100^\circ$



11) If the lengths of two sides of a triangle are 3 cm and 5 cm, what is the largest integer that can represent the length of the third side?

7cm

12) A father's age is now three times the age of his son ,The father's age was 28 years older than his son , How old are each of them now?

$$3X - X = 28$$

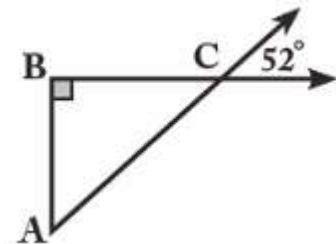
$$2X = 28$$

$$X = 14$$

$$\text{Son} = 14$$

$$\text{Father} = 42$$

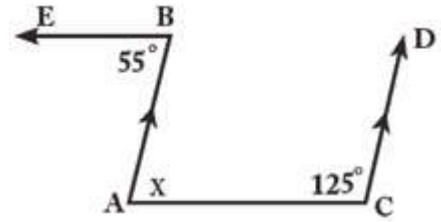
13) In the opposite figure: Find: $m(\angle A) = 38^\circ$



14) In the opposite figure:

1. Find $X = 55^\circ$

2. prove that $\overline{AC} \parallel \overline{BE}$,



$$\therefore \overline{AB} \parallel \overline{CD}$$

$$\therefore m(\angle A) + m(\angle C) = 180^\circ \text{ interior angles}$$

$$\therefore m(\angle A) = 180 - 125 = 55^\circ$$

$$\therefore m(\angle A) = m(\angle B) \text{ alternate angles}$$

$$\therefore \overline{AC} \parallel \overline{BE}$$

15) In the opposite figure: Find with proof the value of: x and y .

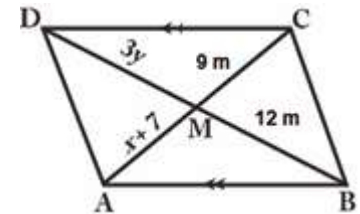
$$\therefore \overline{AB} \parallel \overline{DC}$$

$$\therefore \overline{CB} \parallel \overline{DA}$$

$$\therefore AC \text{ and } DB \text{ bisect each other}$$

$$\therefore x+7=9 \quad x=2$$

$$\therefore 3y=12 \quad y=4$$



16) A triangle has two angles measuring: 36° , 24° . What type of triangle is it according to its angles?

Obtuse angled triangle

17) If: $2X + 5 = 13$, What is the value of: $X - 3$?

$$2X = 13 - 5 = 8 \div 2 = 4 \quad X - 3 = 4 - 3 = 1$$

18) Two vertically opposite angles, one of them measures $(2x^\circ)$ and the other measures $(x + 21^\circ)$ Find the measure of one of them.

$$2X = X + 21 \quad 2X - X = 21 \quad X = 21$$

$$\text{Measure of angle} = 2 \times 21 = 42^\circ$$

19) If ABCD is a parallelogram, $m(\angle B) = 3X + 10$, $m(\angle D) = 2X + 50$, Find $m(\angle C)$

$$m(\angle B) = m(\angle D)$$

$$3X + 10 = 2X + 50$$

$$3X - 2X = 50 - 10$$

$$X = 40$$

$$m(\angle B) = 3 \times 40 + 10 = 110$$

$$m(\angle B) + m(\angle B) = 180$$

$$m(\angle C) = 180 - 110 = 70$$

20) Find in Z the solution set of the following equation: $5X + 2 = 3X + 8$

$$5X + 2 = 3X + 8$$

$$5X - 3X = 8 - 2$$

$$2X = 6$$

$$X = 3$$

$$S.S = \{3\}$$

21) Find in Q the solution set of the following equation: $2(x + 3) = 3(1 - x)$

$$2X+6 = 3-3X$$

$$2X+3X = 3-6$$

$$5X = 6$$

$$X = \frac{6}{5}$$

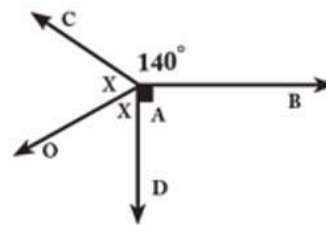
$$S.S = \left\{ \frac{6}{5} \right\}$$

22) Express the following situation with a suitable equation: the sum of two consecutive odd numbers is 87

$$2X+2=87$$

23) In the opposite figure: Find X.

$$X = 360 - (140 + 90) \div 2 = 65$$



24) In the opposite figure: Find with proof $m(\angle ACE)$

$$\therefore \overline{AB} \parallel \overline{CD}$$

$$\therefore m(\angle ACD) + m(\angle A) = 180^\circ \quad \text{interior angles}$$

$$\therefore m(\angle ACD) = 180 - 70 = 110^\circ \quad 1$$

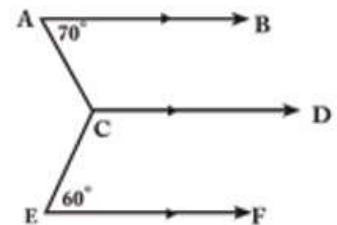
$$\therefore \overline{CD} \parallel \overline{EF}$$

$$\therefore m(\angle ECD) + m(\angle E) = 180^\circ \quad \text{interior angles}$$

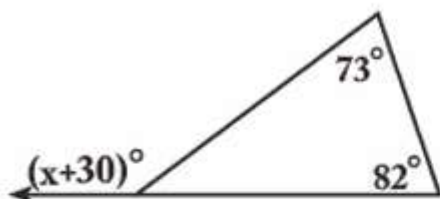
$$\therefore m(\angle ECD) = 180 - 60 = 120^\circ \quad 2$$

By adding 1 and 2

$$\therefore m(\angle ACE) = 360 - (110 + 120) = 130^\circ \quad \text{accumulative angles}$$



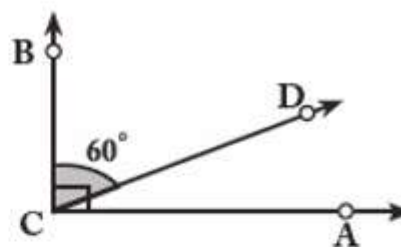
25) In the opposite figure:



Find the value of : x

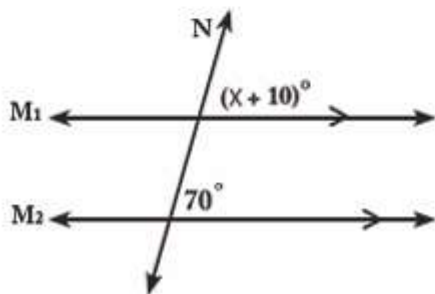
125

26) In the opposite figure:

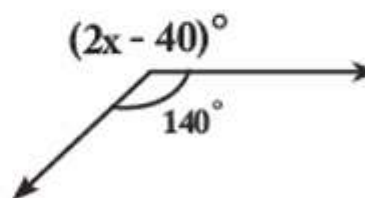
Find: $m(\angle ACD)$ **30**

27) In the opposite figure:

The two lines M_1 and M_2 are parallel, The line N is a transversal, Find the value of x .

**60**

28) In the opposite figure:



Find the value of : x

130

29) Which of the following sets of numbers cannot be used as side lengths of a triangle? And why?

a) 4 cm, 7 cm, 3 cm

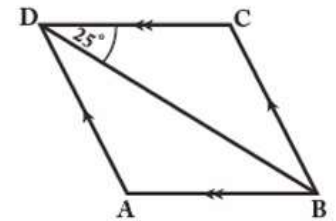
b) 4 cm, 3 cm, 5 cm

c) 5 cm, 5 cm, 5 cm

30) If the sum of the measures of two angles in a triangle is 145° what is the measure of the third angle?

35°

31) In the opposite figure: ABCD is a rhombus. Find with proof: $m(\angle A)$.



$\therefore ABCD$ is a rhombus

$\therefore \overline{DA}$ bisects $(\angle ADC)$

$\therefore m(\angle ADB) = m(\angle CDB) = 25^\circ$, $m(\angle D) 25 + 25 = 50^\circ$

$\therefore m(\angle D) + m(\angle A) = 180$ (interior angles)

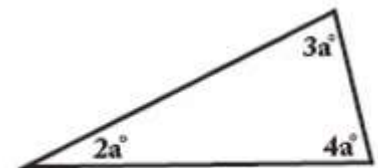
$\therefore m(\angle A) = 180 - 50 = 130^\circ$

32) In the opposite figure: Find the value of a .

$3a + 2a + 4a = 180$

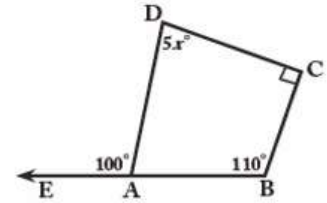
$9a = 180$

$a = 20$



33) In the opposite figure: Find the value of x .

$$x = 16$$



34) In the opposite figure: ABCD is a rectangle.

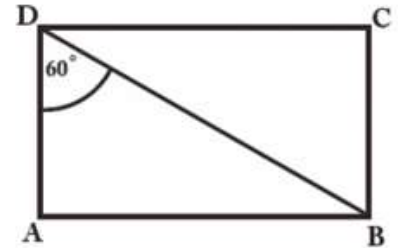
$m(\angle ADB) = 60^\circ$ Find with proof: $m(\angle ABD)$.

$\therefore ABCD$ is a rectangle

$$\therefore m(\angle DAB) = 90^\circ$$

$\therefore$ sum of measures of interior angles of triangle $= 180^\circ$

$$\therefore m(\angle ABD) = 180 - (90 - 60) = 30^\circ$$



35) A triangle has side lengths x cm, x cm, and 10 cm. Find the value of x if the perimeter of triangle is 36 cm.

$$x + x + 10 = 36$$

$$2x + 10 = 36$$

$$2x = 36 - 10 = 26$$

$$x = 13$$

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

